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ABSTRACT

This study traces public sector expenditures for nine Latin American countries in the 1980s in order to determine how social services and social well-being fared during the economic stringencies of the decade. The countries included are Argentina, Bolivia, Brazil, Chile, Costa Rica, the Dominican Republic, El Salvador, Jamaica, and Venezuela. The sectors covered are health, education, and social security. Real per capita public social spending on health, education, and social security fell during some part of the 1980s in every country in the study. Numerous efforts to increase the efficiency and equity of social service provision were undertaken, but the data available do not indicate that these efforts were successful. The policy agenda should include a growth oriented strategy, coupled with a high priority for the social sectors in the government budget in order to assure adequate resources to the social sectors. Even with these steps, increased coverage and quality of social service delivery cannot be expected to result primarily from growth in expenditures. Rather, improvements in service delivery must come from increasing the equity and efficiency of resource use. The usual gamut of tools is relevant--priority for primary health and primary education, targeting, cost recovery with provision for exemptions for the poor and for preventive services, decentralization, and institutional development. Better management and monitoring systems are needed in order to evaluate the success of such program changes. (Author/DB)

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World Bank Discussion Papers

Social Spending in Latin America

The Story of the 1980s

Margaret E. Grosh

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Social Spending in Latin America

The Story of the 1980s

Margaret E. Grosh

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Abstract

This study traces public social sector expenditures for nine Latin American countries in the 1980s in order to determine how social services and social well-being fared during the economic stringencies of the decade. The countries are Argentina, Bolivia, Brazil, Chile, Costa Rica, the Dominican Republic, El Salvador, Jamaica, and Venezuela. The sectors covered are health, education and social security. The study is drawn mostly from public expenditure/investment reviews done by the World Bank in 1988 and 1989.

Real per capita public social spending on health, education and social security fell during some part of the 1980s in every country in the study. The share of health and education expenditures in total government expenditures fell while that of social security rose. Numerous efforts to increase the efficiency and equity of social service provision were undertaken, but the data available do not indicate that they were successful. In spite of lower funding, and no apparent increases in equity or efficiency, social service indicators generally improved in the 1980s. Possible explanations for this apparent paradox include measurement error, time lags, the current reaping of the benefits of past investments in women's education and in water and sewerage systems, the growing role of non-governmental organizations and the for-profit private sector, and technological changes.

The policy agenda should include a growth oriented strategy, coupled with a high priority for the social sectors in the government budget in order to assure adequate resources to the social sectors. Even with these steps, increased coverage and quality of social service delivery cannot be expected to result primarily from growth in expenditures. Rather improvements in service delivery must come from increasing the equity and efficiency of resource use. The usual gamut of tools is relevant -- priority for primary health and primary education, targeting, cost recovery with provision for exemptions for the poor and for preventive services, decentralization, institutional development. Better management and monitoring systems are needed in order to evaluate the success of such program changes.

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Executive Summary

This study traces public social sector expenditures for nine Latin American countries in the 1980s in order to determine how social services and social well-being have fared during the economic stringencies of the decade. The countries are Argentina, Bolivia, Brazil, Chile, Costa Rica, the Dominican Republic, El Salvador, Jamaica, and Venezuela. The sectors covered are health, education and social security. The study is drawn mostly from public expenditure/investment reviews done by the World Bank in the last two years. The study traces the magnitude of expenditures and examines whether there have been improvements in the efficiency or equity of the provision of social services sufficient to outweight the reduction in expenditures. Social indicators are traced through the 1980s in an effort to discern the impact of changes in spending levels and patterns. In appendices, the social cost of adjustment literature is reviewed and the scope and role of public expenditure reviews in the Latin America and Caribbean Region of the World Bank are assessed. The study includes data for as much of the decade as possible. Unfortunately, data are scarce for the latter years, so the most detailed analysis is confined to the period 1980-85.

Expenditures

Social Expenditures. Real per capita public social spending on health and education fell during some part of the 1980s in every country in the study. By 1985, the nine country average of real per capita public health expenditures fell to 70 percent of its 1980 level. The nine country average of real per capita public education expenditures fell to 79 percent of its 1980 level. The nine country average of real per capita public social security expenditures fell to 88 percent of its 1980 level.

After 1985, the data is too incomplete to form comparable averages. Recovery of expenditure levels is found in some countries, but not all. Indeed, variation among countries and years is great throughout the decade.

From 1980-85, real per capita public expenditures in health averaged 84 percent of their 1980 value. In education, real per capita public expenditures averaged 90 percent of their 1980 value, and in social security real per capita public expenditures averaged 98 percent of their 1980 level.

GDP. Real per capita GDP fell during at least part of the period in every country. For the period from 1980 to 1988, only Chile and the Dominican Republic showed annual average positive growth rates of GDP (0.3 and 0.1 percent, respectively). On average, real per capita GDP was 8 percent lower in 1988 than in 1980 for the nine countries examined here.

Share of Government Expenditures in GDP. The share of government expenditures in GDP increased in half of the countries and fell in the other half. On average, from 1980-1985, the share of government expenditure in GDP was 98 percent of its 1980 level.

Social Sectors' Share in Government. The shares of health and education expenditures in total government expenditures fell during the decade. They reached their lowest point in 1985, having fallen to 82 and 92 percent of their 1980 shares, respectively. Over the period from 1980-85, the health sector's share in government was 92 percent of its 1980 share. The education sector's average share in government over the five year period did not change. Social security's share in the government budget rose early in the decade. By 1984, its share peaked at 128 percent of its 1980 level. Over the period from 1980-85, it averaged 110 percent of its 1980 level.

In conclusion, real per capita GDP fell substantially during the 1980s, as did real per capita public expenditures in health and education. The share of health and education in government expenditures fell less, and the share of government in GDP was nearly constant. It would, therefore, seem that it is the lack of resources in total, as much as a diminished priority for health and education, that has caused the decline in real per capita public health and education expenditures. A marked increase in the share of social security in government expenditures compensated for reduced GDP and kept real per capita public social security expenditures growing slightly.

Equity

There is not sufficient household survey data to measure directly changes in the equity of social spending. Instead, available household data are used to rank sectors and sub-sectors by the degree to which their expenditures are progressive. Then changes in the share of the sectors and sub-sectors are traced, so that changes in equity may be inferred. With this approach it appears that the equity of social spending in the region declined slightly between 1980 and 1985/6, although it has increased in some countries. The variety of administrative techniques for targeting within sectors and their use in the study countries suggest that equity can be improved. The number of innovations in the region suggests that efforts are indeed being made to increase the equity of social spending. Without household data, however, their impact cannot be measured.

Efficiency

Administrative statistics (share of primary health and education in total budgets, student-teacher ratios, use of educational materials, repetition rates, test scores, nurse-doctor ratios, hospital efficiency measures, administrative costs in social security and returns to the investment portfolio) were reviewed to determine whether the efficiency of social spending increased as expenditures were reduced. Although the statistics available are unevenly reported and imperfect measures of efficiency, there is some evidence that the efficiency of social service delivery may have fallen. Chronic inefficiencies exist in all three sectors, in both the choice of activities and the use of resources to carry out the chosen activities.

Social Indicators in the 1980s

On the whole, social indicators improved in the 1980s in the nine countries included in this study. Under-five mortality and malnutrition decreased. Immunization rates increased. There are, however, some instances in which indicators declined, or improved at a slower rate, than in the 1970s. The most disturbing instance is the fall in the net primary school enrollment rate in Costa Rica and El Salvador. The minimal progress in lowering under five mortality in the Dominican Republic and Venezuela may also be cause for concern.

Summary and Conclusions

Real per capita public social expenditures have fallen. There is no evidence of substantial improvements in either the equity or efficiency of social spending, yet social indicators have improved in most instances. Possible explanations for this include measurement error, time lags, the current reaping of the benefits of past investments in women's education and in water and sewerage systems, changes in the household's contribution to health and education's production, the growing role of NGO's in some countries, changes in other related sectors, and technological change.

The policy agenda should include a growth oriented strategy, coupled with a high priority for the social sectors in the government budget. This study shows that on average the social sectors' share of government spending suffered only small losses, that government's share in GDP was about constant, and that GDP fell markedly. To a greater degree than generally recognized heretofore, the decline in funding for health and education has not been a result of choice or change in government priorities. It has been the result of falling GDP not accompanied by stronger re-orientation of government priorities. Social security did gain sufficiently in share to offset declines in GDP. Recovery of past funding levels in health and education will depend either upon the long process of GDP recovery, or upon bold decisions to increase the social sectors' share in government expenditures.

Because resources will continue to be very scarce, increased coverage and quality of social service delivery cannot be expected to result from growth in expenditures. Rather improvements in service delivery must come from increasing the equity and efficiency of resource use. Gains in these areas have not been observed with the data at hand. Efforts both to improve equity and efficiency and their monitoring are called for.

The study shows ways in which equity and efficiency can be increased markedly. The usual gamut of tools is relevant -- priority for primary health and primary education, targeting, cost recovery with provision for exemptions for the poor and for preventive services, decentralization, institutional development, better management and monitoring systems, etc. Several innovative uses of these tools have been made in the region. Broader and more determined application of the stock tools should be encouraged, as well as further innovation.

Improvements in the monitoring of equity and efficiency can be achieved. For equity, the Living Standard Measurement Study household surveys (LSMS) developed by the Bank are an excellent tool for monitoring both social service use and poverty. Jamaica is pioneering the use of LSMS surveys in the region, Bolivia is beginning to implement the survey, and several other countries have requested aid in developing it. To improve the monitoring of efficiency in the short run, the Public Sector Expenditure (PSER) missions should more systematically gather and analyze administrative statistics. This may require closer coordination with the line agencies. Where administrative statistics are not regularly consolidated in a useful form, it would be desirable to pay for local consultants to gather and consolidate them for PSER teams. In the long run, the institutional development portion of lending operations should improve the government agencies' own use of such information in management.

Reader's Guide

Readers interested in only a quick overview should read Chapter V: SUMMARY AND CONCLUSIONS, and skim through the graphs and tables in Chapter I, Sections B and C. The real heart of the report is Chapter I: EXPENDITURES. It asks how much have public social sector expenditures declined during the 1980s in the nine Latin American and Caribbean (LAC) sample countries? The main emphasis is on trends and levels averaged over the sample countries and time period. Chapter II: EQUITY and Chapter III: EFFICIENCY ask whether there were changes in the equity and efficiency of spending sufficient to offset declining expenditures. Chapter IV traces the development of social indicators in the sample countries during the 1980s.

A condensed review of the social costs of adjustment literature is provided in Appendix VIII for staff who have not had access to the unpublished half of the work. It outlines the debate on whether social expenditures and social indicators have or have not plummeted in recent years.

A brief reprise of internal Bank issues in the production of Public Sector Expenditure Reviews (PSER)-- the resources these used, their coverage and their use -- is contained in Appendix IX. Appendix X contains a checklist for staff and managers planning future public expenditure reviews.

In order to keep the text readable, a great deal of the detail that makes the study valuable has been relegated to appendices. They should prove a useful reference for those looking for information on particular countries, or international comparisons. Appendix I documents the method used for calculating the expenditure levels and trends. Appendix II contains the basic tables, organized by country, from which the tables in Appendices III-V are derived. Appendix III contains the tables on which the average trend lines graphed in Chapter I are based. Appendices IV and V contain the levels from which the trends are calculated. Appendices VI and VII, respectively, contain the tables on which the graphs in the equity and efficiency chapters are based.

CHAPTER I: Expenditure Trends, Levels and Determinants

Sharply falling real GDP has characterized Latin American economies in the 1980s. The drop in GDP, its consequences, and the programs aimed at reversing it have led to markedly lower real per capita public social sector expenditures in several countries. Because the declines are so arresting, a great deal of attention has been drawn to the social sectors. Thid chapter examines how general the drop in public social expenditures was, the following chapters examine the consequencies of the decline.

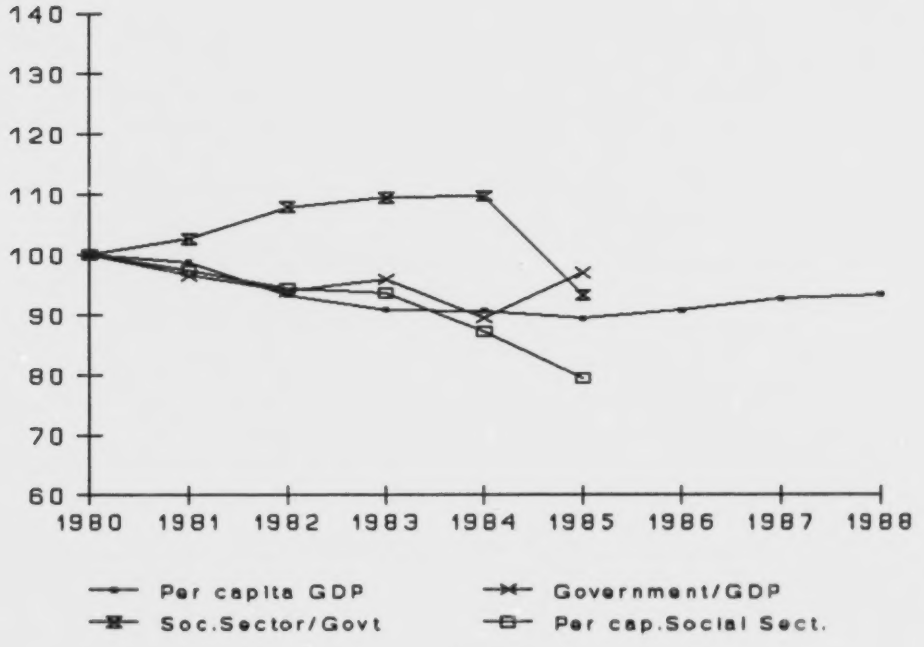
From 1980 to 1984, for the nine countries in this study (Argentina, Bolivia, Brazil, Chile, Costa Rica, the Dominican Republic, El Salvador, Jamaica and Venezuela),[1] the social sectors (health, education and social security) received an increasing share of the government budget.[2] (See Figure I.1). In 1985, the percentage of the government budget dedicated to the social sectors had fallen below its 1980 level. Real per capita expenditures for the social sectors, on the other hand, showed a fairly steady decline. After 1985 a nine country average cannot be calculated due to the lack of data for several countries. In the countries where there is data, there is some indication of a gradual recovery in the social sectors. In general, however, even with an increasing share of government expenditures being devoted to social programs, the decline in real per capita GDP and in government expenditures as a share of GDP forced real per capita spending below its previous levels.

1/ The comparative work presented here is based upon Social Sector or Public Sector Expenditure Reviews (PSERs) carried out as part of the World Bank's four Latin American and Caribbean Country Departments' individual agenda over the last two years. All countries that were scheduled to have completed expenditure reviews by June 1989 were included in this study. These nine countries are not a systematic selection, but rather the broadest sample of countries that it seemed feasible to include. In 1987, they accounted for 57 percent of the LAC Region's population and 58 percent of the Region's GDP. Their GDP per capita is very close to the regional average, but they have experienced slightly stronger recession and recovery during the 1980s than the other countries in the region.

2/ In calculating the average for the nine countries in the sample, each country is given a weight of one. For the enquiry into the results of, or frequency of, a certain policy the observation is equally important in a small country as a large one. The correct method for investigating changes in regional welfare, on the other hand, would be to use a population weighted mean. Brazil's population is so large compared to the other countries', especially that of Jamaica, the Dominican Republic, Costa Rica and El Salvador, that it thoroughly dominates the population weighted mean. It is therefore not presented.

Figure I.1

Index of Per Capita Social Sector Expenditures*
1980 = 100



*Does not include Argentina and El Salv.

The increase in the average share of the social sectors in government was due to a large increase in social security's share, which outweighed decreases in the share of health and education. Even the increase in the combined social sectors' share in the government budget was not sufficient to maintain total social expenditures. As will be discussed below, the picture for health and education is much bleaker than for social security or the total.

The extent to which the decline in real GDP translates into decreasing social sector expenditures is a function of the magnitude of the fall in GDP, the share of government expenditures in GDP, and the share of that sector's expenditures in government expenditures. We turn next to trace the trends in GDP, and government's share in GDP in Section A. Then in Sections B-E the share in government and the resulting expenditure trends and levels are examined separately for health, education, and social security.

Section A: GDP and Government Expenditures as Share of GDP

Gross Domestic Product. Real per capita GDP growth rates in the 1980s were sharply below those in the 1970s and previous decades. In the 1980s, the annual average growth rate of real per capita GDP for the nine countries was -0.9 percent, as opposed to 1.5 percent in the 1970s and 2.4 percent in the 1960s (See Table I.1). The only countries in the sample that did not have a negative annual average growth rate in real per capita GDP were Chile and the Dominican Republic. Bolivia and Argentina suffered the worst declines, with annual average growth rates of -3.0 percent and -1.9 percent respectively.

Table I.1: Per Capita Gross Domestic Product, Total and Growth Rates (in constant 1980 US $ and percent)

COUNTRY	1960	1970	1980	1988	Growth Rates 1960-70 percent	Growth Rates 1970-80 percent	Growth Rates 1980-88 percent
Argentina	1372.5	1834.8	2011.1	1667.9	2.9	0.9	-1.9
Bolivia	382.4	472.9	551.6	406.6	2.1	1.6	-3.0
Brazil	806.7	1110.6	1975.0	1953.5	3.2	5.9	-0.1
Chile	1860.3	2261.9	2473.8	2538.5	2.0	0.9	0.3
Costa Rica	1254.8	1626.1	2178.2	2104.4	2.6	3.0	-0.3
Dom. Rep.	614.6	780.5	1163.8	1174.4	2.4	4.1	0.1
El Salvador	591.4	725.7	788.2	673.2	2.1	0.8	-1.6
Jamaica	1168.3	1585.2	1227.1	1183.2	3.1	-2.5	-0.4
Venezuela	4327.0	5016.3	4617.7	4049.3	1.5	-0.8	-1.3
Average					2.4	1.5	-0.9

Source: Bank Economic and Social Data Base; Social Indicators and National Account Data Bases and own calculations

In the second half of the 1980s, some recovery in real per capita average growth rates occurred. In spite of this, by 1988, average real per capita GDP in the nine countries was still more than 8 percent lower than it had been in 1980. In fact, for five of the nine countries included here, real per capita GDP in 1988 was below 1970 levels, and for three countries, Bolivia, Jamaica, and Venezuela, the 1988 level was closer to that of 1960 than that of 1970.

As will be seen throughout this chapter, both the annual averages and the 1980-88 averages mask a high degree of diversity among the individual countries. In Bolivia, for example, real per capita GDP fell fairly steadily from 1980 on, while in Chile, Jamaica and the Dominican Republic real per capita GDP increased in the beginning of the decade and then fell (see Appendix Table A.IV.5). Also lost in the regional averages is the marked recovery in real per capita GDP levels after 1985 experienced in Brazil, Chile, Costa Rica, the Dominican Republic and Jamaica.

Government in GDP. The share of government in GDP might be expected to change during periods of economic crisis. On the one hand, when GDP

falls, if the absolute level of government expenditures remains at its previous level, the share of government in GDP will increase. If, on the other hand, structural adjustment takes place, the share of government in GDP may decrease for one of two reasons. First, one of the principal goals of adjustment programs is to reduce the fiscal deficit, either by raising revenues or decreasing expenditures. Given the difficulties of raising revenues quickly, the fiscal deficit is often reduced via expenditure reductions. Second, a conscious effort may be made to reduce the size of the state vis a vis that of the private sector. These two trends will lead to a fall in government's share of GDP.

Table I.2:
Government Expenditures as a Percent of GDP

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	21.9	22.0	20.8	24.3	23.1	24.0	24.3	NA	NA	22.7	22.9
Bolivia	19.3	14.7	12.0	12.3	12.8	16.6	13.1	14.0	11.4	14.6	14.0
Brazil	18.9	19.5	20.8	20.9	20.2	24.9	27.5	24.2	NA	20.9	22.1
Chile	37.7	37.4	43.7	44.1	45.4	46.2	44.2	NA	NA	42.4	42.7
Costa Rica	44.9	38.5	35.6	41.2	40.6	39.5	40.1	36.3	37.4	40.1	39.3
Dom. Rep.	16.1	16.2	13.6	14.9	12.6	13.2	14.5	17.1	18.4	14.4	15.2
Salvador	16.9	20.4	19.4	17.4	16.1	18.2	13.8	NA	NA	18.1	17.5
Jamaica	50.3	48.5	47.2	48.7	37.4	37.7	42.1	NA	NA	45.0	44.6
Venezuela	22.5	30.3	28.4	23.6	22.1	22.1	30.8	29.3	29.4	24.8	26.5
Average	27.6	27.5	26.8	27.5	25.6	26.9	27.8	NA	NA	27.0	27.1

Source: Appendix II.
*Most recent year for which data are available for each country.

There is no clear trend for the average share of government in GDP for the sample countries. Individual country trends showed government as a share of GDP rising (in the case of Argentina and Brazil) or falling (in Bolivia and Jamaica). As can be seen in Table I.2, the cross-country average of government expenditures as a percentage of GDP remained fairly stable during the 1980-86 period.

Section B: Social Sector Expenditures

In comparing expenditures across countries and over time a major challenge is finding time series data for appropriate and comparable concepts of expenditures. This report, as most others, makes trade-offs between the various desired qualities in the available data. Before continuing with the results, a small digression on the data used in calculating those results is worthwhile.

To trace public expenditures in social services, consolidated public sector data are preferred. These are available and have been used for Argentina, Chile, Costa Rica, and Venezuela. For Bolivia, the Dominican Republic, El Salvador and Jamaica central government expenditures are used. In these countries state and local expenditures in the social sectors are small (in Bolivia, for example, state and local government expenditures represent 5.8 percent of total public expenditures). For Brazil, the data

used here are for consolidated federal government expenditures. This is clearly not the ideal measure, given that state and municipal expenditures are large in health and education. Unfortunately, however, consolidated public expenditures are only available for a few years. Hence, federal data are used here. Box I.1 presents a comparison of consolidated federal and consolidated public expenditures for the few years where data is available to show how the results might differ if consolidated public expenditures were used.

A further compromise was needed for the treatment of health expenditures. Conceptually it would be most appropriate to include in health expenditures those expenditures made by social security institutes in the provision of health care. For Costa Rica and Brazil this was possible and was done. For Jamaica the issue does not arise, as all public health expenditures are made by the Ministry of Health, and none by the social security system. For the other countries, the breakdown of social security expenditures into pension benefits or health care provision was not possible over the time series so they are discussed together under social security. The health sector as used here, therefore, corresponds mostly to the systems available to all and funded from general revenues. The role of social security systems in health care is summarized in Box I.2.

Box I.1: Health Expenditures by Level

To obtain an accurate picture of total health expenditures in a country it is necessary to use consolidated public expenditure data. This type of data includes expenditures made at both the national level and the state and local level. Using only national/federal or consolidated federal expenditure data causes some underestimation of total social spending to occur.

In the case of Brazil, where the data on social spending at the state and municipal level are unavailable, consolidated public expenditures were used. As data on state and municipal expenditures is excluded, the level of public social spending is underestimated.

Incomplete data on public health expenditures in Brazil indicate that the magnitude of this underestimation is approximately 18 percent (see Table I.B.1). This is a significant proportion of overall public health expenditures in the country and should be kept in mind when inter-country comparisons of spending levels in health are made throughout this report.

Table I.B.1
Distribution of Health Expenditures

Year	Federal	Social Security	State & Municipal	Total
1982	48.8%	32.7%	18.5%	100.0%
1984	45.2%	36.2%	18.6%	100.0%
1986	48.4%	33.7%	17.9%	100.0%

Source: Correia de Campos

Finally the subject of this report is public social expenditures. Private expenditures are an obvious complement, and will have a large role in determining the use and quality of social services. The role of the public sector in total service provisions or financing is discussed in Box I.3.

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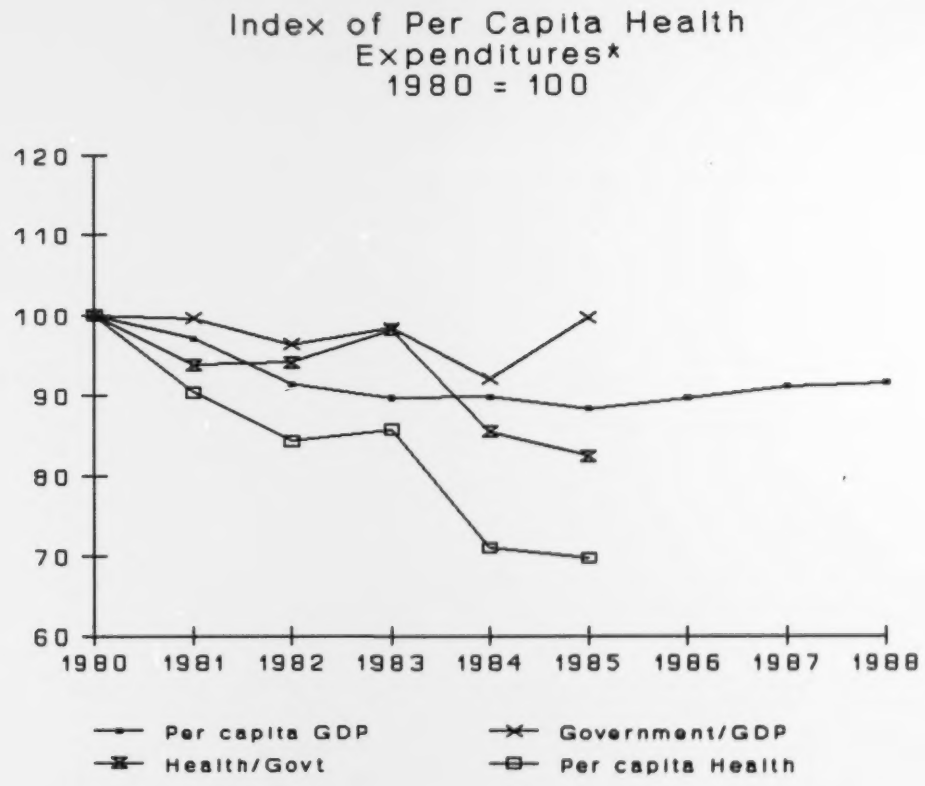
Figure I.2



*Average for all nine countries

Health

Share of Health in Government. For the sample, the average share of health in government expenditures[3] fell by 6[4] percent in 1981, and then almost recovered its former level in 1983 (see Figure I.2). Health's share fell in the next two years, reaching a low point in 1985 of only 82 percent of the 1980 level. Data available for eight countries in 1986 indicate a further erosion of health as a share of government (the average share in 1986 was 67 percent). Within and among countries, there is evidence of a

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3/ Except for Costa Rica and Brazil, health expenditures do not include health expenditures made by social security institutes. See Box I.1.

4/ A fall of 6 percent means that the share in 1982 was 94 percent of its 1980 level, i.e. in 1980 the share of health in the government budget was 8.6 percent and in 1984 it was 7.6 percent. The percent drop should not be confused with a fall of six percentage points of the budget, as health never had so much as six percent of the budget (see Appendix V).

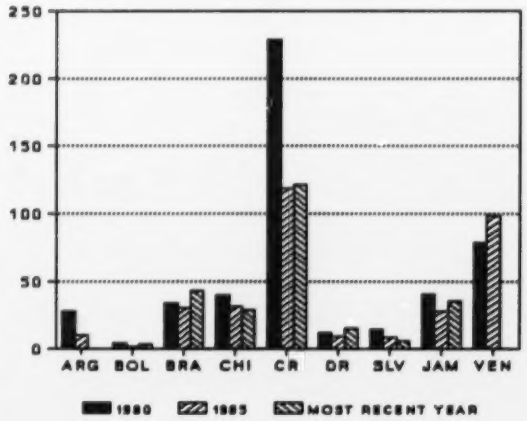
wide degree of change in the share of health in government for any given year.

Per Capita Public Health Expenditures. The movement in average real per capita expenditures, unlike the movement in health's share of government, does show a fairly clear negative trend for the nine countries: only in 1983 do expenditures increase. By 1985 average real per capita health expenditures for the countries as a group had fallen to 70 percent of their 1980 level.

There was considerable variation among countries. In Bolivia, real per capita expenditures fell steadily to only 28 percent of their 1980 level by 1986. In Venezuela, in contrast, per capita health expenditures grew in every year. In 1985, per capita health expenditures had reached 125 percent of their 1980 level. The differences in behavior were similar for the share of health in government (see Appendix Tables A.III.5 and A.III.6 for complete details). Venezuela is the only one of the nine countries in the sample whose 1980-85 average per capita expenditures in health were above the 1980 level.

Figure I.3

Per Capita Expenditures in Health
(in constant 1980 US $)

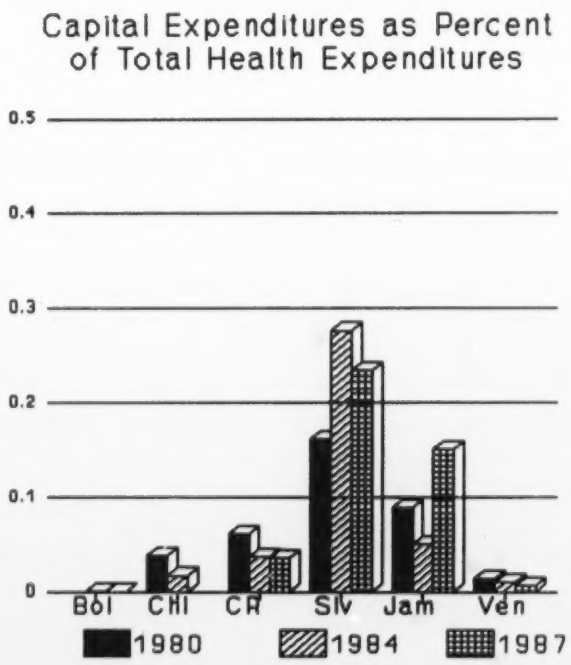


The gravity of the fall in real per capita expenditures depends partly on the initial levels of expenditures. Bolivia, the Dominican Republic, and El Salvador spend less than US$10 per capita (see Figure I.3). The World Health Organization estimated in 1981 that spending of US$10 per capita could achieve primary health care for all. Hospital care, even when used in an appropriately sparing way, and with some cost recovery, will add a further burden on resources (World Bank 1987d). The sample countries, therefore, face very real resource constraints. Even very equitable and efficient programs may not allow full coverage with minimum quality services. These countries could ill afford reductions in their resources. While the Dominican Republic did a good job of protecting its health expenditures in the 1980s, El Salvador did less well and Bolivia, which started from the lowest level, had the largest proportional decline in resources.

Costa Rica's expenditure figures seem exaggerated relative to the others in the graph because they include health expenditures made through the social security network, whereas the other countries (except Brazil) do

not. If those expenditures were eliminated, the level of spending would be about a fifth of what is shown here (see Boxes I.2 and II.1 for a discussion of the reasons for, and implications of, the uneven treatment of health expenditures by source). The Brazil figures refer to consolidated federal health expenditures. Inclusion of state and local health expenditures would raise the numbers by a fifth.

Figure I.4



The split between capital and recurrent expenditures in health has changed to some extent during the 1980s (see Figure 1.4). From 1980 to 1984, the percent of the health budget devoted to capital expenditures fell in four of the five countries for which data are available. Between 1984 and 1987, for the five countries with data, capital expenditures as a share of total expenditures in health had fallen in three countries, remained steady in one and rose in the fifth. Capital expenditures are low, less than 10 percent of total expenditures, except in El Salvador. Thus even major reductions in capital expenditures could not adequately protect recurrent expenditures.

Education

Share of Education in Government. For the nine countries, the average share of education in the government budget rose by 5 percent between 1980 and 1982 (see Figure I.5). This trend was reversed after 1982 and, in 1985, the average share of education in government was down to 92 percent of its 1980 level. After 1985, the pattern of expenditures was varied among the countries for which there are data. Half showed an increase in the share of education in government and the other half a decline. The trend in education expenditures was somewhat different from that in health but the net result was similar although education expenditures, as a percent of government expenditures, did not decline as much as did health expenditures.

Box I.2: Sources of Health Expenditures

Total publicly provided health services come, essentially, from two sources: the Ministry of Health and the Social Security Institute. The expenditures of each organization, in relation to each other, vary widely among the countries in the sample. (See Table I.B.2). In Jamaica, the social security institute provides no health care. In contrast, in Costa Rica, 81 percent of health expenditures are through the social security institute.

Table I.B.2

	Social Security Coverage % of pop 1985	Health Ministry Health Expend. as % of Non-private Health sector	Social Security Health Expend. as % of Non-private Health sector
Argentina	74.3	45	55
Bolivia	25.4[1]	52[3]	48[3]
Brasil	50.0	50[2]	50[2]
Chile	87.3[1]		
Costa Rica	84.6	19	81
Domin. Rep.	5.9	60[4]	40[4]
El Salv.	6.2[1]		
Jamaica	0	100	0
Venezuela	49.9	25[1]	75[1]

Source: Social Security coverage from Mesa-Lago (1989b), p. 13 for all countries except Brasil; Brasil social security coverage from World Bank (1988a) p. 33 ; Expenditure data for Argentina, Brasil, Costa Rica and Venezuela from Mesa-Lago (1989b), p. 33; Data for the Dominican Republic from Rodriguez Grossi (1989), Table 8; Data on Bolivia from World Bank (1989a), p. 38.

[1] 1980
[2] 1982
[3] 1986
[4] 1988

To measure the total impact of the economic crisis of the 1980s on health expenditures in a given country it would be necessary to sum the health expenditures of all the public agencies. This, however, requires specific information concerning the breakdown of expenditures between the Ministry of Health, Social Security Health and Social Security pensions for the decade. Unfortunately these data are not available. In this report, therefore, health expenditures reflect those made by the ministries of health for services available to all. Health expenditures made by the social security systems are included under social security (with the exception of Costa Rica where social security health expenditures are included in health not social security).

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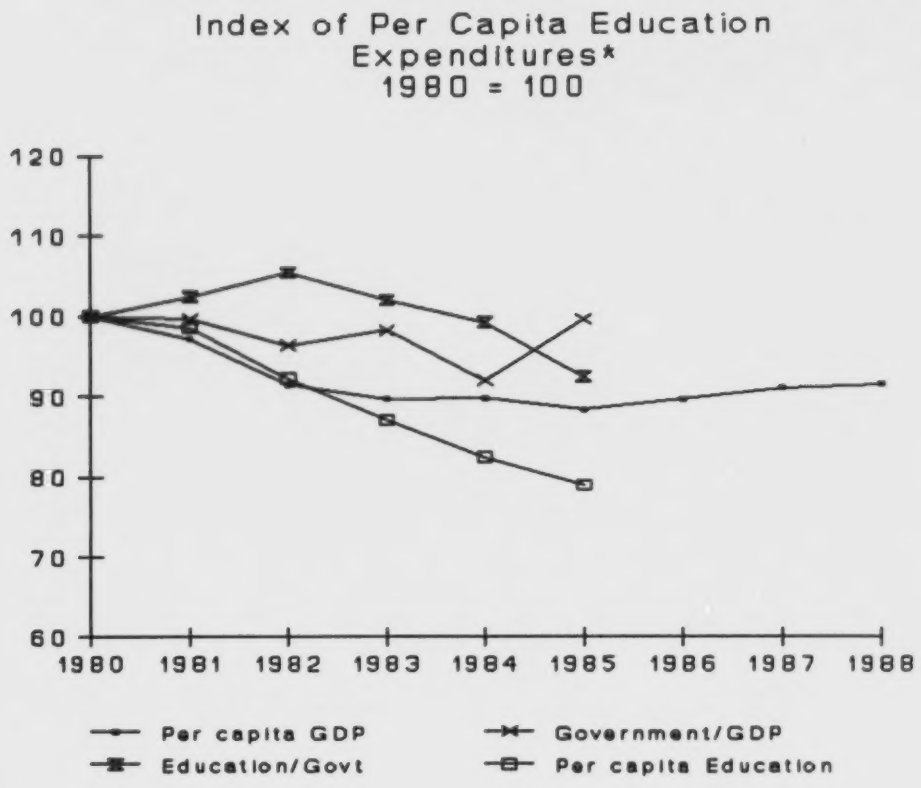
Per capita Education Expenditures. Real per capita education expenditures decreased steadily from 1980 to 1985. By 1985 they had fallen to 79 percent of their 1980 level. After 1985, per capita expenditures in education recovered slightly in the majority of the countries for which there are later data.

Figure I.5



*Average of all nine countries

As in the case of health, the average trends in real per capita education expenditures and the share of education in government hide the variation among the individual countries. Brazil, for example, shows the largest variance in real per capita expenditure levels: average per capita education expenditures grew to 124.8 percent of their 1980 level in 1982, fell by over 30 percentage points in the next two years and then grew by more than 95 percentage points in the following three years. El Salvador, in contrast, experienced a fairly steady decline in real per capita education expenditures from 1980 to 1987 (See Appendix Tables A.III.7 and A.III.8).

Costa Rica experienced one of the sharpest relative declines, but still had, in 1985, the second highest expenditure level per capita (at

Box I.3: The Private Sector in the Provision of Social Services

To the extent that public sector expenditures are falling, some expansion of the private sector is to be expected. Obviously this expansion will be limited by both the ability and willingness of the population to pay for services.

In the education sector, declining public sector expenditures appear to have been partially offset by an increase in the provision of education by the private sector. For the countries for which data are available, the number of students enrolled in private, primary schools increased by an average of 26 percent. On average, secondary enrollments in the private sector also rose although not as much and, in half of the countries for which data is available, the share of the private sector actually fell. (See Table I.B.3)

Table I.B.3:
Percent of Enrollments in the Private Sector

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Primary									
Argentina		18.8					19.7		
Bolivia	9.9	10.2	9.8	9.1	9.1	8.8	9.3	8.8	8.9
Chile[1]	6.2			5.4	4.3	5.2	5.2	5.8	
Chile[2]	20.2			26.9	29.3	31.8	34.3	35.3	
Costa Rica		2.6							4.0
Dominican Republic		13.6	13.9	14.3	14.5	15.6	16.7	17.3	
El Salvador					7.6	8.1	9.8	10.7	12.2
Venezuela	12.2						12.5		
Secondary									
Argentina		30.7					29.3		
Bolivia	27.4	28.6	27.3	22.6	22.2	22.2	21.8	21.4	21.2
Chile[3]	23.5			31.6	34.7	38.6	40.9	40.1	
Chile[4]	28.2			39.1	48.1	48.6	47.2	56.3	
Costa Rica		6.7							7.4
El Salvador					46.9	44.9	46.1	48.4	50.4
Venezuela	19.1							18.9	

Source: Data for Argentina from World Bank, (1987a), Annex 8; Data for Bolivia from World Bank (1989b), Table 4; Data for Chile primary enrollments from Castaneda (1989), p. 23 and own calculations and secondary enrollments from p. 26 and own calculations; Data for Costa Rica from Riboud (1990), p. 12;Data for the Dominican Republic from Rodrigues-Grossi (1989), Table 13; Data for El Salvador from Reyes Posada (1989), Table 18; Data for Jamaica from World Bank (1988a), p. 21; and data for Venezuela from Riboud 1989) p. 22-23 and own calculations.

[1]Non-subsidised private
[2]Subsidised private
[3]Humanities and Science
[4]Vocation/Technical

No comparable data are available to trace changes in the share of health care provided by the private sector during the 1980s.

US$ 100; see Figure I.6). In contrast to the other countries in the sample, Brazil's per capita expenditures increased.

The percent of the total education budget devoted to capital expenditures fell between 1980 and 1984 for all of the countries for which there are data (see Figure I.7). From 1984 to 1987, there does not appear to be a recognizable trend: capital expenditures as a percent of total education expenditures rose in some countries and fell in the others.

Figure I.6

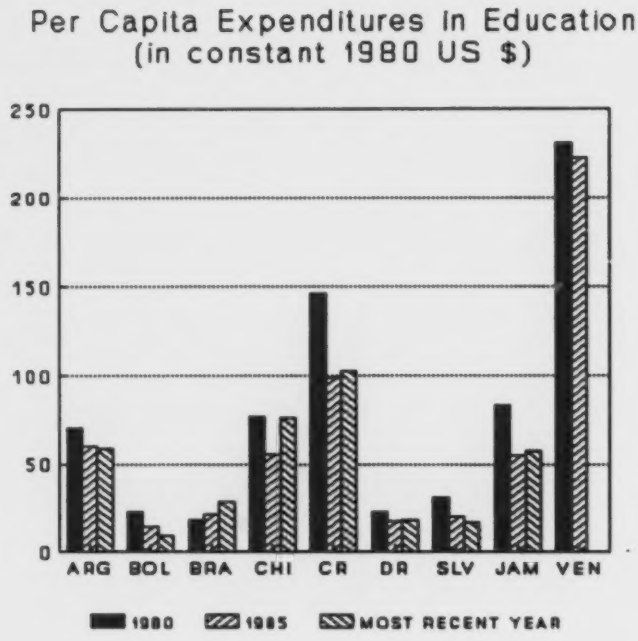
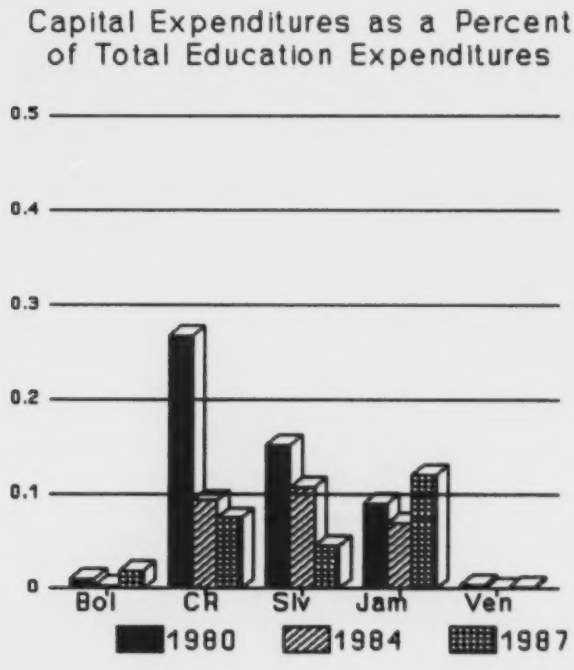
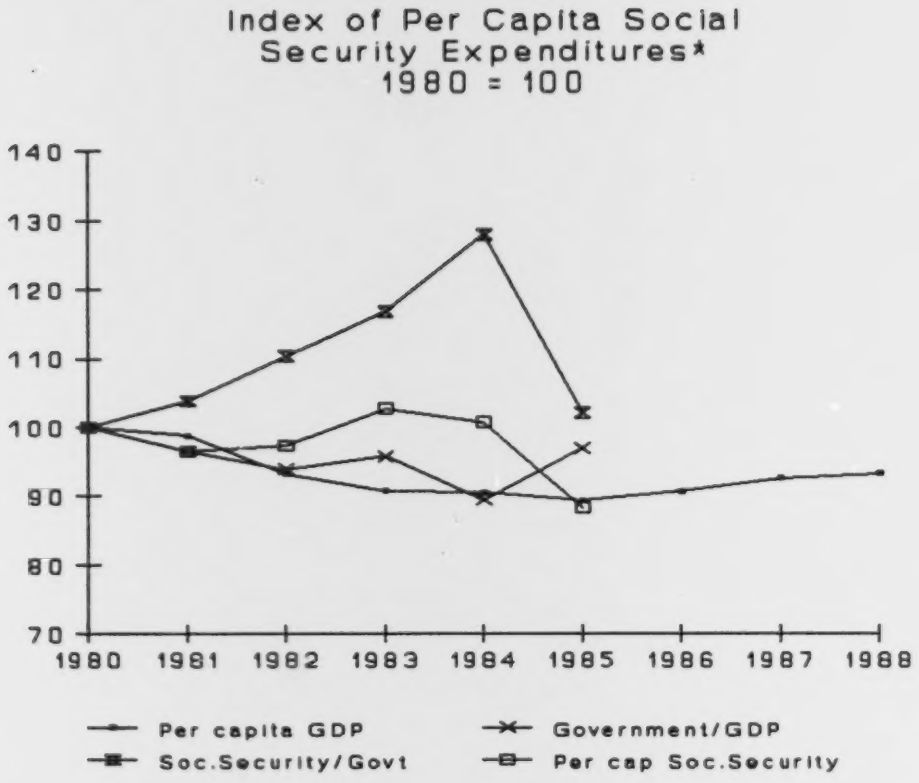


Figure I.7



In short, while the education sector retained much of its share of government expenditures, average real per capita expenditures fell substantially. As noted above, the nadir in average real per capita education expenditures was higher than that for real per capita health expenditures.

Figure I.8



Social Security

Share of Social Security in Government.[5] Unlike the average health and education expenditures in the sample countries, average social security

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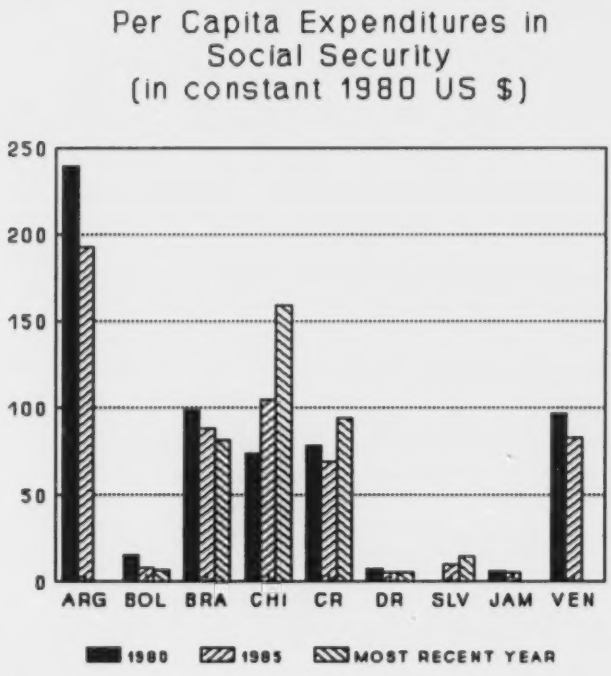
5/ Social security benefits, unlike public health and education services, are largely financed from the contributions of affiliates and their employees (see Box I.2). In the sense that the affiliates have pre-paid for social security benefits, the benefits are, perhaps, not truly public expenditures. Nonetheless, they are considered in this report on public social expenditures because in several other senses they are public social programs. Participation is frequently not voluntary and the sector is managed by the state (except in post-reform Chile and even there the state is heavily involved in regulations and guarantees). Additionally, in many countries, the state is faced with a growing need to cover the deficits of insolvent social security institutes. Finally, social security is an important provider of health services and part of the social safety net. Because social security is such an important part of the dialogue on social policy, it is included here.

expenditures increased in terms of their share of government expenditures and in real per capita terms. As can be seen in Figure I.8, the average share of social security in government rose steadily from 1980 to 1984. It peaked at 128 percent of its 1980 level. Although a sharp decline occurred between 1984 and 1985, social security expenditures' share of government remained above its 1980 level (at 102 percent). The few data existing for the following years indicate that expenditures began to increase again.

Per capita Social Security Expenditures. The increase in the share of social security expenditures was of such a magnitude that real per capita expenditures on social security were largely protected. Per capita expenditures peaked in 1983 at 103 percent of their 1980 level after an uneven rise. By 1985 they had fallen to 88 percent of the 1980 level. The level of per capita social security expenditures is markedly better than the levels for health and education (which sank to 70 and 79 percent of their 1980 levels).

Chile and the Dominican Republic provide examples of different trends in social security expenditures in 1980s. Chile, due to the introduction of new minimum pensions and other programs, increased the share of social security in government substantially over the period. Real per capita levels of expenditures doubled from 1980 to 1987. In contrast to Chile, social security spending in the Dominican Republic did not change much in the decade. In the Dominican Republic both the share of social security in government and real per capita expenditures remained fairly constant through 1984. From 1984 to 1988, expenditures fluctuated mildly.

Figure I.9



Per capita expenditure levels below US$20 in Bolivia, the Dominican Republic and El Salvador reflect both the low coverage of the population by social security, and benefit levels that are much lower than in Chile, Costa Rica and Venezuela. Jamaica's levels are also quite low, but include no health expenditures. Although Argentina experienced a relative drop as severe as any country save Bolivia, its 1985 expenditures of US$192 per capita nearly doubled the runner-up, Chile, at US$105.

Section C: Averages from 1980-85

Examination of the average trends has shown that in at least some years, reductions in social sector expenditures were quite severe. The impact that reduced expenditures will have on the delivery of services or on social indicators will depend, of course, on how prolonged the cutbacks are. This section reports averages over time as a way to compare the different trends examined previously.

The average over time is calculated for 1980-85 because that is the longest period for which data are available in all countries, and hence for which the averages would be comparable. The tables in Appendix III also present averages covering the period from 1980 to the most recent year available in each country.

Table I.3: 1980-85 Period Average as Share of 1980 Level
1980 = 100

	ARG	BOL	BRZ	CHL	CRI	DOM	SLV	JAM	VEN	REGION
GDP per capita	89	88	94	93	92	100	89	99	90	93
Gov't Exp./GDP	103	76	110	113	89	90	107	89	101	98
Share in Gov't										
Health	75	80	86	88	74	111	78	105	133	92
Education	93	110	108	98	90	113	81	102	107	100
Social Security	NA	119	97	140	94	101	NA	115	105	110*
Total	NA	110	96	113	83	110	NA	103	112	104*
Per Capita Expenditures										
Health	70	55	91	91	62	97	77	93	117	84
Education	86	73	108	101	74	100	80	90	97	90
Social Security	NA	78	99	146	77	93	NA	96	94	98*
Total	NA	73	98	116	69	98	NA	91	100	92*

Source: Annex III.
* Does not include Argentina and El Salvador.

The averages, of course, are less dramatic than the peaks and nadirs. In health, real per capita expenditures averaged 84 percent of their 1980 value over the period from 1980-85, whereas their nadir, in 1985, was 70 percent (see Table I.3). Education showed a similar pattern. The average from 1980-85 was 90 percent of the 1980 value, but the nadir was 79 percent. In contrast, social security spending peaked at 103 percent of its 1980 level but averaged only 98 percent of the 1980 level. The result of these countervailing tendencies was that total social spending in 1980-85 averaged 92 percent of its 1980 value.

The averages for the share in government are higher than for expenditure levels. Over the period from 1980-85, the share of health in government slipped only 8 percent from its 1980 share level, while education maintained its share. In contrast to health and education, social security gained in share, averaging 110 percent of its 1980 share. The share of total social sectors increased, averaging 104 percent of its 1980 level.

Summary. Real per capita GDP growth rates were negative in the 1980s for seven of the nine countries in the sample. Indeed, growth performance was so bad that in five of the nine countries, real per capita GDP in 1988 was lower than in 1970. In the first half of the decade real per capita GDP averaged 93 percent of its 1980 level. Government's share in GDP averaged just below the level it had in 1980. During this period, the share of health in government slipped slightly while education averaged the same level it had in 1980. The net result of these changes was that real per capita health and education expenditures fell, averaging 84 and 90 percent, respectively, of their 1980 level. In contrast, the share of social security in government rose to the extent that average real per capita social security expenditures were only 2 percent lower than their 1980 level. The increases in the share of social security more than offset the decreases in health and education so that the share in government of the all the social sectors combined averaged 4 percent higher over the first half of the decade than in 1980. Combined with the fall in GDP, and the slight fall in the share of government in GDP, this translated into an 8 percent decrease in total real per capita social sector expenditures.

Section D: Aggregate Trends Disaggregated

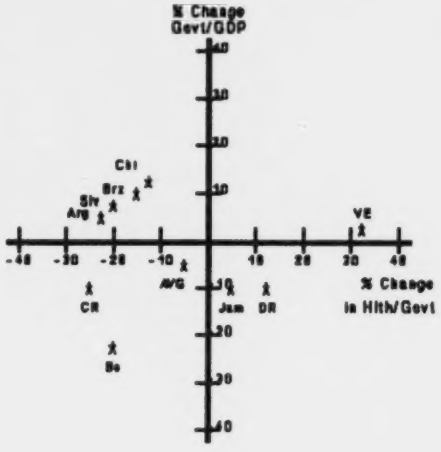
The regional and period averages are convenient ways of answering the question: how general was the decline in social sector expenditures? An inventory approach answers the question: is there evidence that certain indicators declined? The examination of the nadirs answers the question: how bad did things get?

This study has concentrated on the first question. Previous work, especially that sponsored by UNICEF (see Adjustment with a Human Face, 1987), has concentrated on the last two. The answers discussed by the UNICEF authors were that expenditures have declined in some cases, and in some cases gravely. These lessons have demonstrated the need for a more general examination of how general and serious was the decline, which has been the main purpose of this chapter. The rest of this section illustrates for the case of health how the inventory and nadir approaches can be used. The results would be parallel for education and more positive for social security.

Examination of the regional averages leads to a clear conclusion: the absolute decline in real per capita expenditures in health and education is due to a fall in real per capita GDP coupled with a constant share of government in GDP and a reduction in the share of health in government. Education's share of government was maintained.

Figure I.10

Average Percent Change in Government & Health Expenditures 1980-85 Country Averages



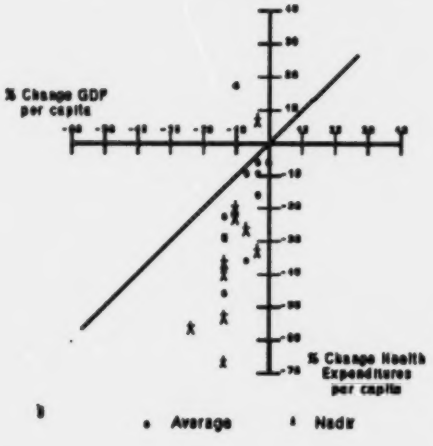
1 While this is true on average, that average reflects not so much the observation of the same pattern in several countries, but rather the observation of different patterns in approximately equal and opposing directions. Figure I.10 shows more clearly the variation in country experience for the health sector.

The vertical axis is the percentage change in the share of government in GDP, averaged over the period 1980-85. The horizontal axis is the percentage change in the share of the sector in GDP. Over the period 1980-85 in the Dominican Republic the share of government in GDP was 90 percent of its 1980 share while the share of health in government averaged 111 percent of is 1980 level. Thus the observation for the Dominican Republic is in the lower right quadrant (11,-10).

As the figure shows, of the four possible combinations of choices governments could make about their size relative to the economy, and the priority of health in the public budget, approximately equal numbers of countries made each choice. The analogous graphs for education would lead to the same conclusion. In the case of sociasecurity, the change in its share of government was negative only in Costa Rica.

Figure I.11

Decline in Per Capita Health Expenditures Relative to GDP



Variation over time is the other important variable hidden by period averages. Although on average, expenditures in health and education have fallen only slightly more than GDP, in some years they fell much more. When both the share of government in GDP and the share of the sector in government were below average, the result was a decline in sectoral expenditures markedly greater than the decline in GDP.

Figure I.11 illustrates the differences between the averages and the worst years using regional and period averages for levels of real

per capita GDP and real per capita health expenditures. The vertical axis is the percentage change in real per capita health expenditures. The horizontal axis is the percentage change in real per capita GDP. All points below the diagonal 45 degree line represent cases in which health expenditures fell more than GDP (in percentage terms). The circles plot the average from 1980-85. The stars plot the nadir of each outcome. Looking only at the circles, or period averages, it is evident that eight of the nine countries lie below the diagonal. Thus real per capita health expenditures fell proportionately more than real per capita GDP.

The stars, or years of lowest levels, lie well below the averages. Thus examination of the worst years would lead to a much stronger conclusion about the severity of the decline in real per capita health expenditures relative to that of GDP than does examination of averages.

Section E: Vulnerability of Sector Expenditures to Changes in Government Expenditures

It is often assumed that social sectors are extremely vulnerable to cutbacks in expenditures during periods of economic crisis. (It is precisely for this reason that the patterns of expenditures in the social sectors have been presented in such detail in this chapter). Hicks and Kubisch (1983) and Hicks (1988) have shown, however, that the social sectors are protected during periods of economic crisis. These works have demonstrated that, while expenditures in the social sectors decrease, they do so less than overall government expenditures. Hicks and Kubisch calculate a coefficient of vulnerability[6] (V) that compares the change in government expenditures to the change in expenditures in the social sectors for a series of countries.

$$V_j = \frac{\text{percent change in expenditures in the jth sector}}{\text{percent change in government expenditures}}$$

For 32 countries that experienced a fall in real government expenditures for some period between 1972 and 1980, Hicks and Kubisch (1983) calculated that the social sectors in general had a vulnerability coefficient of 0.4. This coefficient indicates that social sector spending decreased on 40 percent as much as overall government spending. In his 1988 study, Hicks' examines 24 countries whose real government expenditures fell by more than five percent between 1978-84. The coefficient of vulnerability for the social sectors was 0.66 which indicates that social sector expenditures fell one-third less than government expenditures. In short, both papers show that the social sectors were protected relative to the other sectors.

6/ The coefficient of vulnerability is simply the elasticity of sectoral expenditures with respect to government expenditures calculated only for observations in which government expenditures are falling.

The experiences of the nine countries included in the present study confirm the findings of Hicks and Kubisch for the social sectors as a whole but also illustrate that the impact of falling government expenditures is not uniform. As shown in Table I.4, the social sector as a whole was protected in the years when government expenditures were decreasing.[7] The vulnerability coefficient of 0.47 indicates that social sector expenditures decreased by somewhat less than one half as much as government expenditures.

Falling government expenditures affected the individual sectors in different ways. Education expenditures parallelled those of the social sectors overall. The coefficient of 0.56 shows that education was slightly more vulnerable but still highly protected. The health sector proves to have been extremely vulnerable to falling government expenditures. Overall health expenditures 25 percent more than government expenditures. The third sector, social security, experienced an increase in the level of expenditures at the time that government expenditures fell.

The above has shown that, overall, social sectors are indeed protected in times of declining government expenditure (although individual sectors may not be). It should be remembered, however, that this does not mean that these sectors are not experiencing a decline in expenditures-- they are. A protected sector's expenditures may decrease, but this decrease is proportionally less than that experienced by government expenditures. The extent to which declining expenditures in the social sectors affect the welfare of the population of these countries depends on three factors: i) the adequacy of the original level of spending in each sector; ii) the absolute decline in expenditures (and not just the relative decline emphasized in the present study) and; iii) the ability of the sectors to recover expenditure losses in years of increasing government expenditures.

Table I.4
Coefficients of Vulnerability
(Average 1980-1988)*

	Education	Health	Social Security	Social Sector
Argentina	1.42	5.88	NA	NA
Bolivia	0.61	0.53	1.04	0.90
Brazil	- 0.81	1.52	0.39	0.56
Chile	-12.82	8.56	-32.77	-20.24
Costa Rica	0.75	1.16	-0.04	0.74
Dom. Rep.	0.27	0.60	0.51	0.57
El Salv.	0.73	0.44	-1.18	-0.21
Jamaica	0.77	-0.12	-0.93	0.42
Venezuela	0.72	0.02	-0.51	0.29
AVERAGE**	0.56	1.25	-0.10	0.47

Sources: Appendices II, III, IV and V.
*For periods when government expenditures decreased
**Chile is excluded from the average as changes in sector expenditures were a result of specific, large-scale reforms and not simply a reaction to decreasing government expenditures.

1/ Chile is excluded from the discussion here as the changes in the sectors are a result of specific, large-scale reforms and not simply a reaction to decreasing government expenditures.

The ability of the sectors, in years of increasing government expenditures, to recover losses suffered during fiscal cuts depends on the elasticity of sector expenditures with respect to government expenditures when government expenditures increase. This is the analog of the coefficient of vulnerability. An analysis of variance test shows that there is no statistically significant difference between the two sets of elasticities calculated from the two subsets of information for all of the sectors discussed here.[8] Thus when government expenditures recover their former level, health and social security expenditures should recover their former level.

Section F: Discussion

The range in health and education expenditures, and their different degrees of protection, indicates that there is no immutable force in adjustment programs that imposes cuts on the social sectors. Obvious though this may seem, a priori, a great deal of the polemics surrounding social costs of adjustment seem to assume that cutbacks in the social sectors are unavoidable. These cross-country data show that social expenditures are not always cut during adjustment programs.

A closer examination of the expenditure trends in relation to the timing of adjustment programs is also revealing. In some cases, declining social expenditures may be as much attributable to the economic problems that adjustment programs are meant to resolve as to the adjustment programs themselves.

In the case of Bolivia, expenditures were sharply lower from 1981 to 1985 than they had been in 1980. These were the years of the economic crisis that precipitated the adjustment program, which had its first budget cycle in 1986. Social expenditures were indeed cut even further in the first year of the adjustment, but have been increasing since then.

In Jamaica, expenditures fell from 1982 to 1986. The adjustment program is considered to have been at its fullest in 1985 and 1986. In a simple time trend regression model, Behrman and Deolalikar (1988) showed that, while social sector expenditures fell during the adjustment program, they did not deviate from the trend line of secular decline. Thus, again, declining funding of the social sectors is as much a function of the economic problems preceding adjustment, as it is of adjustment itself.

8/ Note that the numbers presented in Table I.4 as the coefficients of vulnerability are not, strictly speaking, the general elasticity of sectoral expenditures with respect to government expenditures, even though they are not different in a statistical sense. The coefficient of vulnerability is calculated averaging only those observations for which government expenditures fall. The general elasticity should be calculated for all observations. Because we wish to make a comparison to the literature, we present here the coefficients of vulnerability, rather than the elasticities calculated using all observations.

This observation is important in putting into perspective the social costs of adjustment. If expenditures were falling prior to adjustment, the counterfactual case for what might happen in the social sectors without adjustment would include a decline in spending as well. While no attempt is made here to formalize or quantify this proposition, it is put forward as a significant theme to bear in mind when considering reviews of the social sectors, especially those that link a decline in social indicators to adjustment.

It was noted that the share of social sectors in government has slipped only a little. Given the growth in debt service as a share of government expenditures, this implies that a determined effort was made to maintain social expenditures in the face of reduced discretionary resources.

Social security expenditures as a share of government and in absolute terms gained even during a period of severe fiscal constraint. This presumably is at least partly due to its main funding source being earmarked wage taxes. The advantage of earmarking is that it will guarantee expenditures for a valued program in tight times and this is clearly demonstrated here. The disadvantage is that governments did not have the flexibility to shift monies between the sectors as may have been desirable in the worsening circumstances.

Several countries reduced the share of capital expenditures in total health and education expenditures. Even so, they were not able to maintain real per capita recurrent expenditure levels. The tradeoff of recurrent for capital expenditure may be a sensible short run strategy, but if continued over long periods, may reduce the ability of the public sector to deliver social services as much or more than a commensurate fall in recurrent expenditures.

Expenditures in health and education have fallen, in spite of attempts to protect their share in the government budget (and to preserve recurrent expenditures in favor of capital expenditures). Is this bad? If the reductions in expenditures are achieved by reducing waste, then lowered expenditures would mean funds liberated for other desirable purposes, rather than a deterioration in publicly provided services. It may be the case that the extreme fiscal constraint of the 1980s has helped governments reallocate expenditures in sensible, but politically difficult, ways. The following chapters look at the equity and efficiency of social spending to determine whether increased effectiveness has compensated for reduced expenditures.

Chapter II: Equity

There is not sufficient household survey data in to measure directly changes in the equity of social spending in the three sectors and nine countries during the period considered here. Instead, household data are used to rank sectors and sub-sectors by the degree to which their expenditures are progressive. Then changes in the share of the sectors and sub-sectors are traced, so that changes in equity can be inferred. With this approach it appears that the equity of social spending has declined slightly for the region between 1980 and 1985/86. Some countries have apparently improved the equity of their social spending, especially the Dominican Republic. A number of administrative techniques for targeting within sectors are outlined and illustrated with examples from the study countries. The variety and number of mechanisms available suggest that equity can be improved. The number of innovations in the region suggests that efforts are indeed being made to increase the equity of social spending. Unfortunately, the approach used here is not sufficiently sensitive to detect these increases.

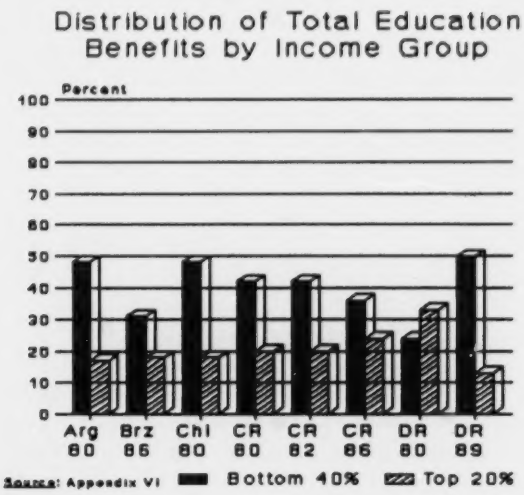
Section A: Incidence of Delivery of Social Services by Sector

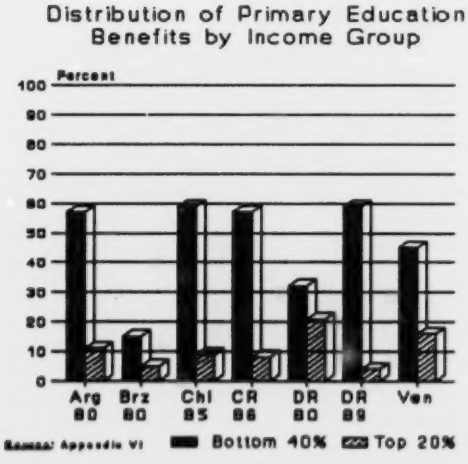
The available household survey data make clear a partial ranking of progressivity between sectors for these countries. Public health expenditures are the most progressive, followed by education, with social security pensions in a distant third place. Within education, expenditures at the primary level are markedly progressive, and those at the university level are markedly regressive. Within social security, medical benefits are probably more progressive than pensions.

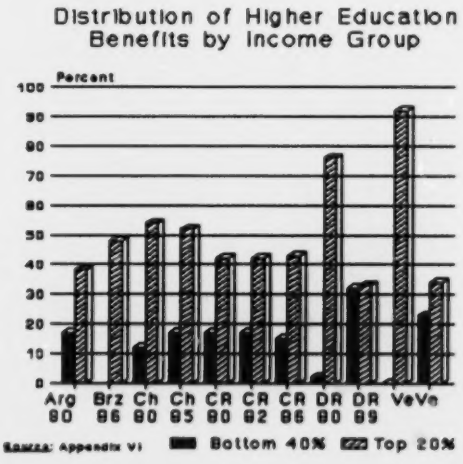
Education. The proportion of total education benefits accruing to the poorest 40 percent of the population ranges from 24-50 percent for five countries with eight observations. Between 13 and 33 percent of total education spending benefits the wealthiest 20 percent of the population (see Figure II.1).

The difference in incidence by level of education is dramatic. In five of the seven observations of primary education expenditures, benefits are progressive, with as much as 59 percent of the benefits accruing to the poorest 40 percent of the population. In two observations, the incidence is not progressive. In the Dominican Republic in 1980, the poorest 40 percent of the population received 32 percent of primary school spending. The worst case by far was Brazil in 1980. Only 15 percent of education benefits were received by the poorest 40 percent of the population. Overall, the proportion of benefits accruing to the wealthiest 20 percent of the population is less variable, ranging from 4 percent to 21 percent, both in the Dominican Republic.

Figure II.1







For higher education, the benefits accruing to the lowest 40 percent of the income distribution range from 0 to 32 percent. The range of benefits accruing to the wealthiest 20 percent of the population is from 33 to 92 percent.

There are several factors that affect how progressive the distribution of primary education benefits are, which are not individually quantified in the studies, but which explain some of the results. First, the poor tend to have larger family sizes and hence children are not distributed evenly across the income distribution. Rather they are concentrated somewhat in the lower deciles. Second, the wealthier are usually more likely to attend private schools than the poor. These factors may explain why fewer than 20 percent of benefits accrue to the wealthiest 20 percent of the population, even though the wealthier children are probably all in school. At the

higher education level, the distribution is very regressive because poor youth are those most likely to have dropped out before completing requirements for entry, and few can bear the opportunity cost of delaying entry into the labor market.

The progressive impact of benefits is probably exaggerated by these incidence figures because, for the most part, the studies simply divided the total primary education bill by the proportion of enrolled children from each decile. This assumes that spending per child is uniform. Usually children in wealthier neighborhoods have better schools, more classroom, laboratory or library materials, more highly trained teachers, etc. These differences are not measured.

Health. The incidence of health expenditures is remarkably progressive. The most progressive cases were Argentina and the Dominican Republic in 1980, with the bottom two quintiles receiving 69 and 71 percent of the benefits (respectively) and the top quintile receiving only 4 percent of benefits in Argentina and 12 percent of the benefits in the Dominican Republic. Chile, Costa Rica and Jamaica report similar, though somewhat less progressive incidence. Brazil in 1980 had a regressive distribution of health benefits with only 30 percent of benefits going to the lowest two quintiles, and 39 percent to the highest quintile (see Figure II.2). It is interesting to note that for the Dominican Republic, the only country in the sample with multiple observations, the distribution of health benefits became less progressive during the 1980s.

Social Security Pensions. Social security pensions are regressive (see Figure II.3). In Chile in 1983, 42 percent of pensions were paid to those in the wealthiest quintile, while 19 percent of pensions were paid to those in the lowest two quintiles. The most progressive distribution was found in the Dominican Republic in 1980, with 9 percent of benefits paid to the wealthiest quintile and 21 percent to the poorest two quintiles.

Three important factors cause pensions to be so unequally distributed. The first is one of definition. Pensions are paid in proportion to contribution and salary. Hence higher salaried workers will receive higher pensions.

The second factor is that, in many countries, social security covers a relatively small part of the population. In El Salvador and the Dominican Republic, for example, only 6 and 12 percent of the population, respectively, is covered. Since coverage usually starts toward the top of the income distribution with workers in the urban formal sector, and frequently powerful, unionized and well paid sub-sectors thereof, it is not until coverage becomes widespread that pension benefits are not concentrated at the upper end of the income distribution. This stage has certainly been reached in Argentina, Chile, Costa Rica and Jamaica, where coverage exceeds three quarters of their populations (Mesa-Lago 1989a, pg.62).

Figure II.2

Distribution of Health Benefits By Income Group

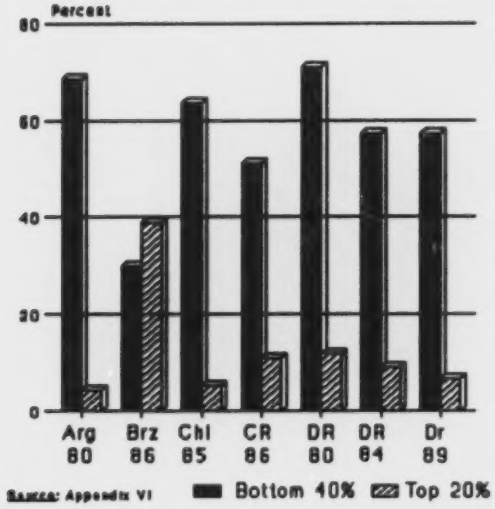
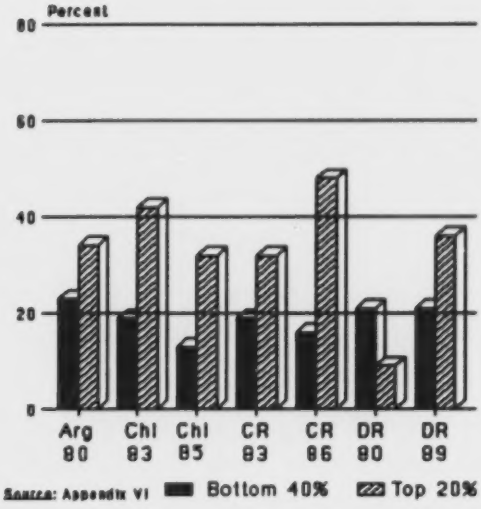


Figure II.3

Distribution of Pension Benefits by Income Group



The third important factor in the inequality of pension benefits is the differences that exist in benefits between the general pension scheme and special programs for specific sub-sectors. Bolivia, for example, has a relatively uniform set of pension programs. The best paid program is for workers in the petroleum industry. Its average benefits are 2.2 times the average benefit of the general pension program. In Chile, public employees' pensions average 3.2 times the average for the national scheme, bank workers, 5.7 times more, police 6.9 times more, and the armed forces 8 times more. The Dominican Republic and Costa Rica are intermediate with the most favored sectors paying benefits 4 to 6 times that of the general program.

Social Security Medical Benefits. For no country do we have equivalent figures showing the distribution of social security medical benefits, but there are two generalizations that can give us a notion of how they compare to the other sub-sectors. First, social security medical benefits are probably more progressively distributed than social security pensions. Those who get higher pensions, by definition, will end up in higher quintiles, and those who earned higher salaries will get higher pensions. Medical benefits, on the other hand, will not influence directly the measure used to rank individuals in most of the household surveys, and may be claimed equally by all affiliates. Indeed, the wealthier affiliates are more likely than their poorer counterparts to use the private sector, so that among affiliates, the medical benefits will be progressively distributed, and the pensions regressively distributed. Second, social security medical benefits are probably less progressively distributed than public health medical benefits. Social security generally covers urban,

formal sector workers who are wealthier than those uncovered--the rural workers, and the urban informal sector. We therefore conclude that public health medical benefits are more progressive than social security health benefits, which are more progressive than social security pension benefits. We unfortunately cannot quantify this ranking, nor can we rank social security medical benefits relative to education.

It is, of course, true that part of the social security benefits are funded through employee contributions. There may be cross-subsidization among groups (see Mesa-Lago 1989b, p. 36-39). Nonetheless, in all countries the government subsidizes at least a part of the benefits. Without information on the differential funding by type and level of benefit, it is assumed that the subsidy is uniform and that the distribution of benefits from government subsidies is the same as the distribution of total social security expenditures.

Having established that health expenditures are the most progressive, followed by education, with social security pensions in a distant third place, we can now infer changes in the incidence of benefits by examining changes in the share of these sectors in expenditures, even though we do not have a time series of comparable household survey evidence for most of these countries. This is done in the following section.

Section B: Changes in Sectoral Allocation: the Implications for Equity

Changes in the relative shares of the sectoral and sub-sectoral allocations indicate that equity may have decreased during the first part of the 1980s. Health's share was constant, education's reduced, and social security's expanded. Within education, the share of university grew relative to primary. Within social security, the share of pension benefits appears to be expanding relative to health care benefits.

Intersectoral shifts. In order to examine the change in incidence, first a "total" social spending was constructed. This is the sum of expenditures on education, health, and social security. Within this total, the share of each sector is compared for an early and a late year. Then, where available, information on the sub-sectoral distribution in education and social security is discussed.

In the construction of total social spending, it might be more accurate to include only the government subsidy to social security, rather than the total expenditures for social security. This would afford a comparison between uses of general government revenues. There is some controversy on the point. The inclusion of all social security expenditures may be relevant, or only partly exaggerated, for three reasons: (i) government employees are a large share of those covered bysecurity in some countries, and hence the employer and employee contributions are costs to the state; (ii) employer and employee

Box II.1: Alternate Treatment of Social Security, for Argentina and Costa Rica

Having included all social security expenditures in total social spending may have been misleading. This box explores in what way and to what extent conclusions would change with an alternate treatment.

The required measure of state support for social security would be the regular scheduled contribution as a third party for covered workers, any miscellaneous earmarked tax revenues, and the deficit in social security balances which the state must cover. This information is not available. Rather we use the state proportion of social security revenues from Mesa-Lago 1989a and 1989b. These are available for 1983 and 1980 (or an unspecified year close to it). In this alternate treatment the social security expenditures used in Section B of this chapter are scaled down to that share financed through this state contribution. From 1980-83 the state contribution grew remarkably in Argentina from 7.4% to 36% of social security revenues. Our only social security expenditure information is from 1985, however, so applying the 36% state share of revenue from 1983 may be inaccurate. In Costa Rica, the state share of revenue declined slightly from 20.4% to 18.6% from 1980 to 1983. Recalculating the shares of health, education, and social security with this method leads to the comparisons in Table B.II.1.

Table B.II.1: Results of Alternate Social Security Treatments

	Share of Sectors in Total Social Spending			
	Full SS Expend.		State-Subsidized SS Expend.	
Argentina	**1980**	**1985**	**1980**	**1985**
Education	22	11	56	25
Health	12	9	31	19
Soc. Sec.	66	80	12	38
Total	100	100	100	100
Costa Rica	**1980**	**1986**	**1980**	**1986**
Education	38	34	45	44
Health	42	40	50	50
Soc. Sec.	21	24	3	6
Total	100	100	100	100

In Argentina, either technique leads to the strong conclusion that education and health have lost share to social security. In Costa Rica, using total social security expenditures leads to a clear, but small, loss of share in health and education in favor of social security. Because the share of social security revenues contributed by the state falls according to our data, using

Box II.1 (cont.): Alternate Treatment of Social Security for Argentina and Costa Rica

The use of total social security expenditures will always make both the pie, and the share of social security, bigger than if only government subsidization of social security is counted. Changes in the force of conclusions can therefore be affected. Changes in the direction conclusions about trends, however, will only occur when changes in share of the state in social security revenues are of opposite direction as changes in the share of social security expenditures in the total.

For the reader's interest, Table II.B.2 summarizes the best information available about the share of the state in social security revenues.

Table II.B.2: Sources of Revenues for Social Security, 1980 and 1983

	Insured		Employer		State & Taxes		Investment		Other	
	1980	1983	1980	1983	1980	1983	1980	1983	1980	1983
Argentina	38.4	34.5	49.4	37.1	7.4	26.0	2.0	1.8	2.8	0.3
Bolivia	28.7	25.5	33.6	34.8	6.2	24.2	7.8	12.4	3.6	3.1
Brasil	13.8		74.0		8.2		0.0		2.2	
Chile	20.5	31.1	38.3	2.1	14.2	48.9	2.0	13.8	5.6	2.0
Costa R.	27.6	28.4	43.9	47.0	20.4	18.6	5.2	5.3	0.9	0.7
Dom. Rep.	43.7									
El Salv.	23.4	23.7	63.0	35.8	0.9	0.0	11.8	20.8	0.9	0.9
Jamaica	24.3		29.7		7.6		38.3		0.1	
Venezuela	26.8	28.6	33.5	39.3	6.8	13.7	13.7	18.3	0.2	0.1

Source: Data for 1980 from Mesa-Lago, 1989b, pg.23; for 1983 from Mesa-Lago, 1989a, p. 23a.

contributions made for workers in the private sector may be passed on to consumers through forward shifting in much the same way as income or excise taxes; and (iii) the other sectors are partly financed by earmarked taxes, so excluding the earmarked source of only social security would not necessarily improve the comparability of concepts. Regardless of one's theoretical stand, only patchy information is available on the subsidization of social security. In order to move forward at all, the total expenditures are included here. In Box II.1 of this chapter, the possible distortions caused by this choice are illustrated for Argentina and Costa Rica.

As measured by changes in intersectoral allocations, the equity in social spending may have worsened during the 1980s, although the shift in composition of social spending was of quite modest magnitude. The share of health fell from 23.8 percent of total social spending in 1980 to 22

percent of total social spending in 1985 (see Table II.1). Education's share of social spending has remained constant. The difference has been gained by social security. The direction of this shift probably worsens the equity of social spending. While some of the social security expenditures go to health services, the majority of them are for pensions. As discussed above, health expenditures are more progressive than social security expenditures, especially those going to pensions.

Table II.1: Share of Social Sectors 1980 and 1985

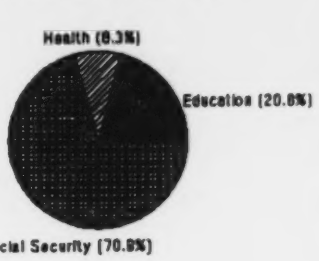
(in percent)

	1980 Average*	1985 Average
Education.	41.6	41.5
Health	23.8	22.0
Social Security	34.4	36.5

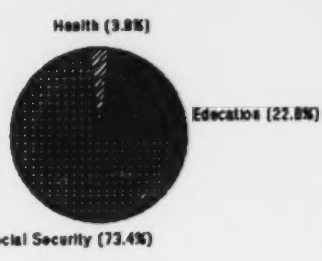
Sources: Annexes II and VI.
*Does not sum to 100 due to rounding.

The regional averages are fairly constant, not so much because there have been no changes in the individual countries, but because they have been in opposite directions. In Argentina, Bolivia, Brazil and Costa Rica, health's share of social spending fell while education's share increased (see Figure II.1). In Argentina and Costa Rica, social security's share also increased. Therefore the equity of social spending has decreased in those countries. In Jamaica and Venezuela, health's share of social spending increased while education's decreased. In Venezuela social security also decreased. The shift in resources in Venezuela is clearly toward a more equitable distribution of social sector expenditures while that of Jamaica is less so. Only in the Dominincan Republic did both health and education's shares in social spending increase with health's share increasing more than education's. This represents the most equitable shift in resources of the countries examined here.

Intra-sectoral shifts in education. Changes in equity within the education sector were mixed. On the one hand, the majority of the countries increased the share of the budget devoted to primary education. On the other hand, however, half of the countries increased the share of higher education in the total education budget. (See Figure III.1 and Appendix Tables A.VII.6 and A.VII.7). On average, between 1980 and 1986, the primary sector's share of the education budget rose by eight percent while that of higher education rose by almost four percent. In short, both levels grew at the expense of secondary education. The increased share of education expenditures in primary education has increased sectoral equity to some degree but this has been partially negated by the corresponding shift of resources into higher education. It should be noted that for specific countries the change in equity in the sector has been dramatic (Argentina and Brazil, for example).



Source: Annex II and IV.



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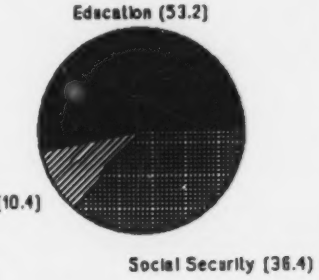

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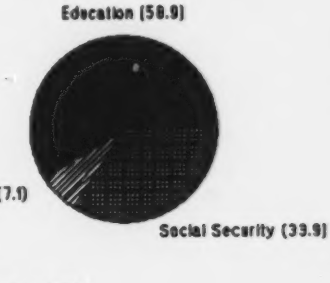

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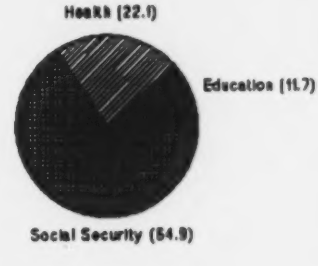

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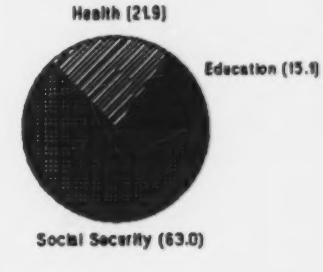

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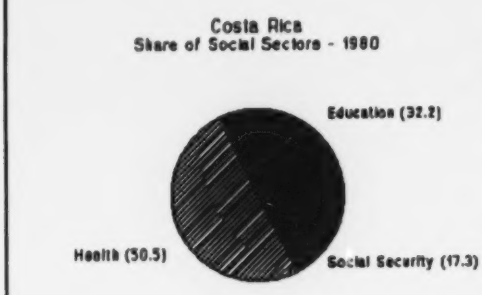

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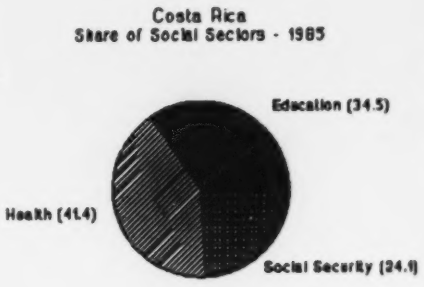

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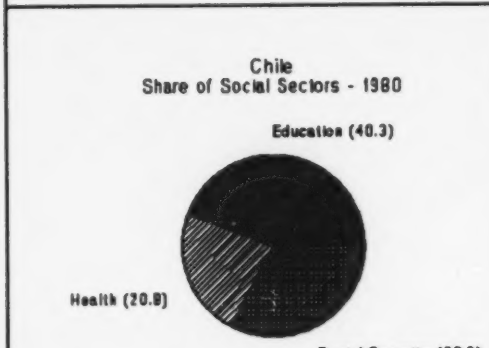

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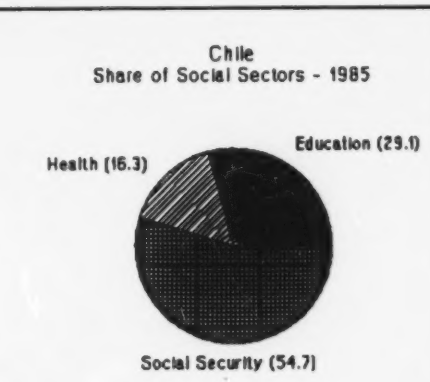

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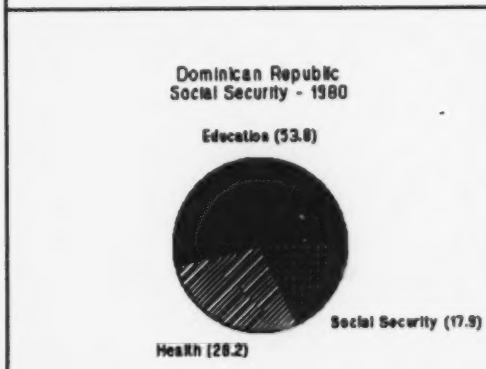

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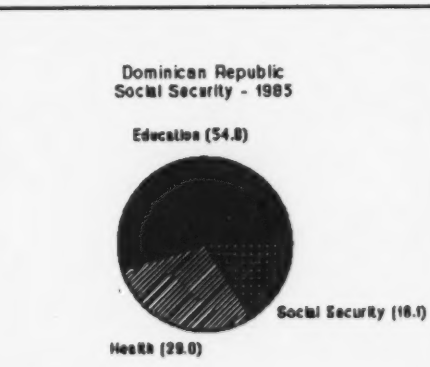

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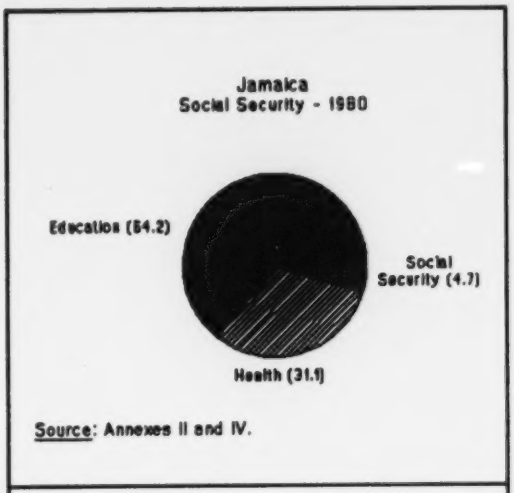

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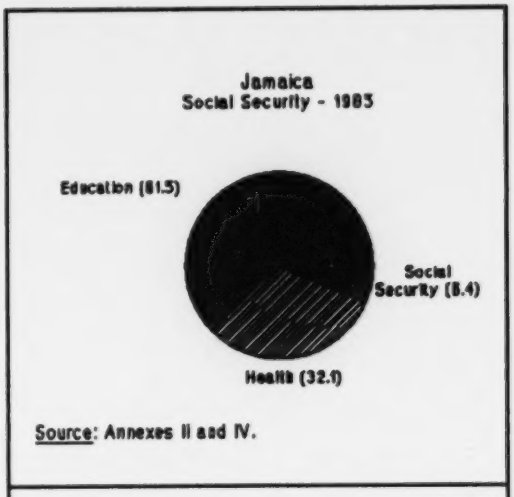

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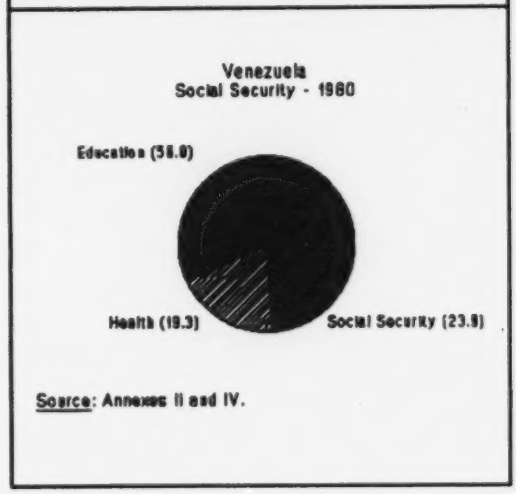

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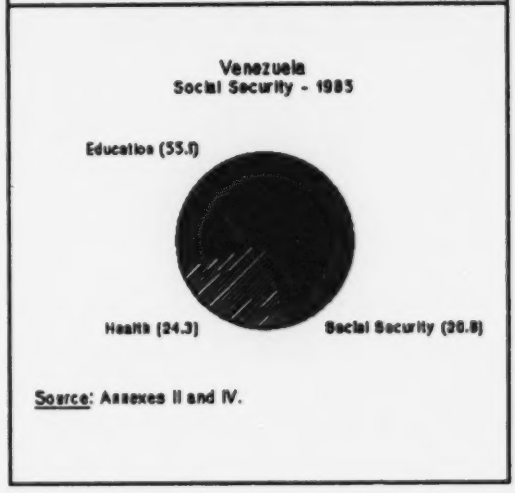

Source: Annexes II and IV.

The changes in the equity of social spending occasioned by shifting resources between sectors were largely reinforced by changes within education. Brazil and the Dominican Republic both increased the equity of their spending by shifting resources from social security to education and health. They reinforced their improvements by shifting resources within education from universities to primary education (although Brazil shifted resources back to universities after 1987). In Argentina and Costa Rica, the deterioration in equity as deduced from shifting resources from health and education to social security was reinforced by shifting resources within education to universities from the primary level. In Jamaica, with indeterminant changes at the intersectoral level, the intrasectoral allocation of education has been about constant. In Bolivia, the changes at the intersectoral level were indeterminant, but equity was increased by

shifts within education. Only Chile has moved towards less equity at the intersectoral level, but more equity at the intrasectoral level.

Intra-sectoral shifts in social security. Because pensions are probably much more regressive than medical benefits, the equity of social security spending as a whole is probably declining, markedly so in some countries.[9] The information on the intra-sectoral allocation within social security is older, and thus we cannot well address changes in the 1980s. Over the longer haul, though, Table II.2 makes it quite clear that within social security the share of pensions has grown. As the systems mature and larger shares of affiliates retire, this trend will continue.

Table II:2: Share of Pensions in Social Security Expenditures

	Year	Share	Year	Share
Argentina	1975	58.3	1983	58.6
Bolivia	1961	13.7	1983	44.7
Brasil	1970	40.2	1983	62.3
Chile	1965	36.2	1983	68.4
Costa Rica	1965	4.7	1983	26.9
Dominican Republic	1977	25.3	1982	25.7
El Salvador	1965	0	1983	17.8
Jamaica	1975	92.0	1983	94.3
Venezuela	1965	0	1975	34.2
Average		30.0		48.1

Source: Mesa-Lago (1989a), p. 89.

Section C: Mechanisms for the Improvement of Equity

A variety of means to improve the equity of social services within a given sector or sub-sector have been attempted in the sample countries. The efforts illustrate most of the main instruments available for the improvement of equity. Regrettably, without more detailed data we cannot quantify their impact. This section sketches tools to improve equity, and the experience of the countries in using them. Each instrument is subject to constraints of political economy, cost, and administrative feasibility. Accordingly, the mechanism most appropriate to increase equity may differ according to the characteristics of the program and country.

Targeting by (Sub-)Sector

As demonstrated in Section A of this chapter the incidence of expenditures differs in the various sectors and sub-sectors of the social sectors. A shift of resources from one sub-sector to another can markedly improve the equity of expenditures because of differences in the nature of services and their clients. There need be no explicit administrative mechanism for targeting, or separate administrative costs.

9/ This ignores the shares of other social security programs such as professional risk, welfare and unemployment benefits because if they exist at all, they are small in most countries.

Example. Jamaica, in its Human Resources Development Program,and its preceding actions, is attempting to redress deterioration in its social sectors after several years of reduced funding. The measures taken include not only the restoration of funding levels, but explicit goals to increase the share of primary and pre-primary education from 32 percent of the education budget in 1982, to 38 percent in 1991. Similarly the share of primary health care in the health budget will rise from 16 percent in 1982 to 25 percent in 1990 (see World Bank, 1989i).

Uniform Per Capita Subsidies

Uniform per capita subsidies provide a universal cash subsidy or level of service throughout the population, or at least to all those who avail themselves of the service. Because use of the service is not always uniform across income groups, the distribution of benefits is not always uniform. This is the principal that underlies public health services. All who come are served, but because the wealthier are more likely to use private outpatient services instead, the system becomes a progressive one. In education, free or low university tuition is also justified on the grounds that it allows universal access to higher education. However as seen previously, the non-tuition barriers are usually so great that the poor attend the university infrequently and therefore do not get access to the tuition subsidies theoretically available to them.

Example. The Chilean educational reforms of 1980-81 are based on the principal of subsidizing students equally, irrespective of whether they choose to attend public or private schools. A standard subsidy is paid per child from the central government to the school. Chile uses a schedule of reimbursement rates that allow for higher payments per student for rural schools, technical schools, special education, and differentiates payments by grade (see Castaneda, 1989).

Extension of Coverage

If, as in the case of social security, the program usually starts with the elite, and extends down the income distribution as its coverage expands, then increased coverage may reduce inequity.[10] This option may be quite costly as it involves the extension of the program itself, but usually such expansion is a goal in its own right. One of the principal

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10/ If initially the program covers only a small share of the population, increased coverage may at first increase overall measures of inequality. Past a certain point, expanded coverage will decrease inequality (See Fields, 1980). Even if it increases overall measures of inequality, expansion of services can still be deemed positive, even from an equity view point. For example, if only a tenth of the population is covered by health care, increasing that to two tenths would raise the Gini coefficient of welfare after the benefits of the health care are accounted for. It is nonetheless better for two tenths than one tenth of the population to be covered.

choices faced in the provision of social services is, given the budget constraint, what trade-off to make between coverage and quality? It is clear that governments almost never choose the extreme of universal coverage of low and uniform quality. Rather they choose to provide some sophisticated or high quality services, even though that leaves too few resources to provide the service equally to those in remote areas or the poor. That with growth the system will expand to extend high quality services to all is becoming increasingly unlikely with the poor prospects for expansion of social service budgets.

Example. In Costa Rica it would appear that increases in coverage of sickness-maternity benefits increased the equality of the income distribution after service benefits are accounted for. In 1973, the redistributive effect of sickness-maternity benefits was minimal but by 1978, after coverage increased, the distribution of sickness-maternity benefits caused an income transfer of two percent from the richest twenty percent of the population to the lowest forty percent. The coverage of social security in Costa Rica increased from 38 percent in 1970 to 68 percent in 1985. Although no studies of the distributive effect of these benefits have been carried out recently, it would appear that there has been an increase in the redistributive effect of sickness-maternity benefits in social security (Mesa-Lago 1989a and b).

Targeting by Individual Need

Targeting by individual need requires the most complex and costly administrative apparatus, and the most cooperation from the target population. The most common categories of individual need used are means testing and nutritional status.

Means testing is the investigation of an individual or household's welfare as compared to a defined standard of adequacy. The welfare measure used is usually income for a month or year. The defined standard is a poverty line that may be adjusted for area of residence, composition of the family or other such factors.

Nutritional status is sometimes used as the screening criteria for participation in supplemental feeding programs. Any child whose weight or height is below a specified weight for age or weight for height, or who has failed to grow according to prescribed growth norms, is eligible for the supplement program.

These forms of targeting by individual need are designed to ensure that benefits go only to those who need them--i.e. they are most concerned with reducing leakage (error of inclusion). In principal, they can reduce leakage to zero. They are, however, prone to leaving some needy persons out of the program. The administrative procedures require that the eligible come forward and submit themselves to screening. If they do not have sufficient knowledge of the program to do so, or if in relation to the benefits, the procedures are too burdensome in terms of time, travel or

stigma, then significant portions of those eligible may not bother to get admitted to the program. Targeting by individual criteria is most useful when the benefit per person is large. This justifies a higher administrative cost for the targeting procedure because the cost of benefits given to untargeted individuals would be high. Further, large benefits will encourage eligible people to come forward for screening and help reduce the problems of under-coverage (error of exclusion).

Example. Chile's ficha cas is a sophisticated version of a means test. The system is based on a survey form that is administered by a social worker, who classifies the household based on characteristics of the dwelling, educational and labor status of each family member, and family income. The government's intention is to identify the poorest 30 percent of the population and provide them with an eligibility card based on this survey. The card determines the amount of housing subsidies, income transfers, and school food programs to which the household is entitled. If the survey technique works well, the poor will be identified in a positive manner (rather than waiting for them to come and use programs to which they are entitled) and informed of the programs for which they qualify (see Griffin, 1988).

Example. Admittance to Chile's rehabilitation centers for undernourished children is limited to those children who exhibit moderate or severe malnutrition. The child stays enrolled until s/he is completely recuperated. The program offers full feeding, physical and mental stimulation of the child, and education for the mother. The cost per undernourished child averaged about US$600 in 1987.

Demographic Characteristic

Targeting by demographic characteristic uses the demographic characteristic as a proxy for need or risk. The characteristic is more easily and reliably observable than the actual need or risk. The most frequent form of targeting by demographic characteristic is in nutrition programs. For example, children under five, and pregnant or lactating women will be eligible for food supplements. The elderly are also sometimes targeted with income transfers or reduced fees for medical care.

Example. Major non-governmental organizations in Bolivia target their food aid through mothers' clubs. Participants receive food supplements of several kilograms of food per household per month as well as training in basic health and nutrition, and occasionally in productivity enhancing skills. Participation in the clubs is designed to be limited to women who are pregnant or have young children (though compliance with the rule is not universal).

Geographic Targeting

A second proxy for need or risk is geographic targeting. In many countries poverty is so much more prevalent in rural areas than in urban areas, or in some regions, that targeting by very gross geographic area is effective. Within urban areas, the slums are distinguishable from more acceptable conditions, and neighborhoods may form a useful definition for targeting. The efficacy of geographic targeting depends upon the spatial distribution of poverty, the size and homogeneity of geographic unit considered, and the possibility that people will migrate to areas where services are provided.

In Brazil, the Northeast region is much poorer than the rest of the country. In 1986, average income per capita was less than US$300 per year in the Northeast, but US$2000 for the country as a whole. Infant mortality was 116 per thousand live births in the Northeast, but only 52 for the rest of Brazil. Thus in Brazil, targeting expenditures to the Northeast will be an effective way of reaching the neediest (World Bank, 1988c).

In contrast, Jamaica is more homogenous. In 1989 rural per capita consumption was US$820, while in the Kingston Metropolitan Area, per capita consumption was US$1430. A Theil decomposition divides total inequality into that part due to differences between the regional averages, and that part due to variation around the average within each region. Theil coefficients calculated for Jamaica show that only about 9 percent of inequality is due to rural/urban differences, and that only 11 percent of inequality is due to differences between parishes. Thus targeting only along rural/urban lines, or by parish will not be sufficient to ensure either good coverage of the poor, or little leakage to the well-off (STATIN and PIOJ, 1989).

Example. In Costa Rica, health and nutrition programs have been targeted to the thirty cantons with the highest infant mortality rates. Within fifteen years regional differences have been largely eliminated and the average rate has fallen (presentation, EDI Health Care Financing Seminar, 2/90).

Self-Selection

Targeting by self-selection utilizes the principal that only the needy will use the benefit if it is inconvenient for the wealthy to claim or of a caliber that they are unlikely to want. Public health care itself, or nutrition programs tied to the use of public health care are frequently targeted by self-selection. Where countries have active private health industries in addition to a public health system, there is usually a strong correlation between income and use of the private system. Thus the wealthy self-select out of benefits, and a large portion of public expenditures will accrue to the poor.

Example. Nutrition programs may utilize self-selection by providing foods not favored by the wealthy, or adults. Chile, for example, used to

provide milk powder usable, among other things, for general baking and in cafe con leche served to adults. When cereal was mixed in with the milk, its use was more limited, with infant's gruel apparently using a higher share. Changes in the distribution mechanism, from delivery through the work place, to delivery through government health clinics also lowered participation rates of the wealthier families.

A good example of targeting by self-selection is the maternal-child portion of the Jamaican food stamps program. All pregnant or recently-delivered women, and all children under five years of age are eligible by law to receive food stamps. In order to be registered in the program, and to collect the food stamps, the participant must go regularly to distribution points located in public primary clinics. Because wealthier families are not likely to make use of the public clinics, they do not get enrolled for food stamps. In 1988, 72 percent of pregnant or recently delivered women in the lowest consumption quintile of the population were receiving food stamps, while only 4 percent of such women in the wealthiest quintile were recipients. For children, in the poorest quintile 61 percent of the households with children were recipients, while only 11 percent of the richest quintile's households with children in the were recipients (STATIN and World Bank, 1988).

In sum, the variety and number of efforts being made to improve targeting within sectors and programs is considerable. They may outweigh the apparent worsening of equity caused by the modest shift from the education sector to the social security, but without household survey data it is difficult to assess the changes in the equity of social service provision accurately. On the whole, however, it seems unlikely that improvements in equity have been of a scope that would offset the decline in expenditures by the social sectors. The following chapter turns to efficiency to see whether more was achieved in efficiency improvements than in equity.

Chapter III: Efficiency

While expenditure levels are important, the efficiency with which expenditures and resources are used will also play an important role in the provision of social services. In general, if resources are being used efficiently, a reduction in funding will lead to a decline in the quality or quantity of services. If, however, resources have been inefficiently used, it is possible for the impact of declining funding to be offset by an increase in efficiency.

Overall, the evidence from the sample countries indicates that efficiency in the social sectors is neither high nor has it improved in recent years. In fact, it can tentatively be concluded that efficiency has declined slightly. In other words, the impact of falling expenditures in the social sectors has not been offset by increased efficiency during the 1980s. This does not mean, however, that no efforts have been made to improve efficiency in the region. There have been a number of promising management innovations employed in the region which provide anecdotal evidence of improvements in efficiency not reflected in aggregate statistics.

This chapter considers separately the two components of efficiency: external and internal. External efficiency is concerned with the choice of the most effective set of activities to attain a desired goal. Internal efficiency is concerned with using the fewest resources to carry out the chosen activities. Ideally we would be able to use outcomes, such as infant mortality rates or literacy, linked to inputs to measure efficiency. Because that requires data far more sophisticated than available for this study, outcomes are considered separately in Chapter IV: SOCIAL INDICATORS. This chapter uses administrative statistics to discuss first external efficiency, then internal efficiency. The third part of the chapter provides illustrations from the case studies of some innovative mechanisms being used to increase the efficiency of social service delivery.

Section A: External Efficiency

Education

On average, external efficiency has decreased in education in the region during the 1980s, but increased in three of the seven countries for which information is available. The decline in total resources has, therefore, been partially offset by improvements in their use in those three countries.

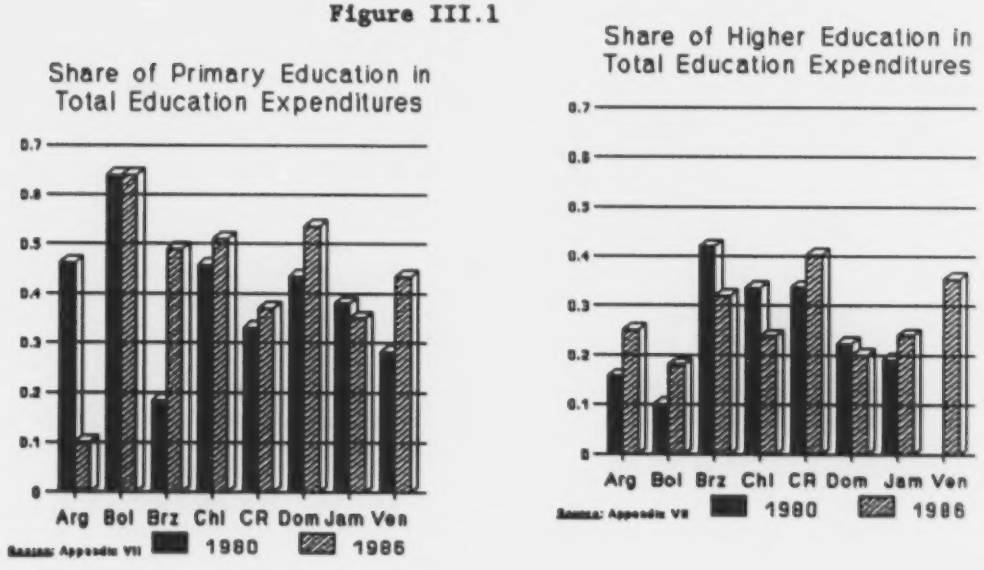
Education's most direct and concrete impact is on the labor productivity of the educated individual. There is also evidence that education enables parents to use household resources more effectively in ways that improve their children's health, nutrition and education outcomes, other factors aside (see Behrman, 1989). Education is usually credited with somewhat less concrete benefits in allowing the educated individual to participate more fully in modern society and the democratic

process. Because the returns gained from increased labor productivity are more easily measured than the other benefits, they are the most frequently used measure of benefit from education. Consideration of the other benefits would probably lead to many of the same conclusions about priorities in education.

The ranking of different levels of education by rate of return in labor productivity is clearly established. Of the three levels of education, the rate of return is highest in primary education. Averaged over ten countries in Latin America and the Caribbean, the social rate of return for primary education is 26 percent. For secondary education the social rate of return is 18 percent, and for higher education it is 16 percent (Psacharopoulos; 1985). Because the rate of return is higher for primary schooling than for universities, the external efficiency of the education system will be higher if it spends a larger percentage of its resources for primary education than for universities.

It is difficult to assess the net change in external efficiency of education among the nine countries in the sample. On the one hand, the share of primary education, as a percent of total education expenditures, rose by eight percent from 1980 to 1986. As primary education is the level of education with the highest returns, this indicates an increase in external efficiency. On the other hand, the share of higher education, the level with the lowest return, also increased, albeit to a lesser extent. This, of course, represents a decrease in external efficiency. Due to the magnitude of the changes in some countries, the average shares indicate a slight increase in overall external efficiency. If, however, the change in external efficiency in each country is analyzed, it appears that the majority of the countries for which data are available experienced a decrease in external efficiency in education.

Figure III.1



The overall changes in external efficiency varied widely from country to country (see Figure III.1). For Brazil, Chile and the Dominican Republic, external efficiency in education increased. In the case of Brazil the increase was very large--from 18 percent of the total education expenditure to 49 percent and was accompanied by a decrease in the share of higher education. Education expenditures in both Chile and the Dominican Republic followed a similar pattern although the shifts in resources were not as marked. In contrast, the share of primary education in both Argentina and Jamaica decreased and, in both countries, the share of higher education was increased. It is clear that external efficiency decreased in both countries. Bolivia showed a slight decrease in external efficiency as higher education's share of expenditures rose while primary's share remained constant. In Costa Rica both primary and higher education's share increased with the greater increase being in higher education. Overall, this probably represents a decline in external efficiency.

Health

The goal of health care is to avert illness and premature death. This can be accomplished through prevention or treatment. Prevention is more desirable in that it totally eliminates rather than just reduces the loss of welfare due to discomfort and foregone labor productivity. Because economics cannot assess losses to welfare due to suffering, handicap, or death, cost effectiveness analysis is used instead of cost-benefit analysis to evaluate which activities should be supported with scarce resources. Cost effectiveness analysis compares the cost incurred by various activities to avert a certain number of days of illness, number of deaths, or years of life lost. Several economic studies (see Box III.1) suggest that the cost incurred per death averted is significantly lower for community and preventive services than for curative services. Thus the share of community and preventive services in the total health budget may be used as an indicator of external efficiency.

The share of the total budget devoted to community and preventive services, the most cost-effective ways of saving lives, has fallen in three countries and been stable in two. In Argentina, the share of environmental health (part of community services) in the total health budget has declined. In Bolivia, for the three departments for which we have information, the share of hospital care (largely curative) increased considerably. In Venezuela, the share of curative care increases. Within the curative care category, the share provided in hospitals accounts for almost all of the increase. In these three countries external efficiency has probably declined. In El Salvador, the share of hospitals fluctuates, but exhibits no strong trend. In Jamaica, the share of secondary and tertiary services rises markedly, but at the cost of administrative services. The share of primary care is about stable. In these two countries, external efficiency appears to be unchanged (see Table III.1).

Box III.1: Cost Effectiveness by Level of Health Care

	Percentage of total per capita health services	Approximate cost on health/life saved
Direct services to patients		
Curative	70-85	High (US$500-5,000)
Treatment and care of patients through health facilities and independent providers (including traditional practitioners)		
Retail sale of medicines		
Preventive	10-20	Medium (US$100-600)
Maternal and child health care (for example, immunization, growth monitoring, family planning, promotion of better breastfeeding and weaning practices)		
Adult care (for example, hypertension screening, pap smears)		
Community services	5-10	Low (less than US$250)
Vector control programs		
Educational and promotional programs on health and hygiene		
Monitoring of disease patterns		

For the percentage distribution of total expenditure on health, see de Ferranti (1985). They are rough estimates by the authors of the present study. The cost per additional life saved is based on selected studies. Cochrane and Zachariah (1983) show that the cost per additional life saved of hospitalization ranges between US$1,300 for hospital-based diarrhea treatment in Matlab, Bangladesh (1982), and US$2,820 for treatments in large hospitals in Morocco (1971). Creese (1986) estimates the cost of single antigen immunization programs at US$2-14; Barnum (1980), Barnum and others (1980), Barlow (1976), and Shepard (1982) estimate the cost of immunization programs per additional life saved at between US$24 and US$368, depending on the scope of the immunization program. Programs aimed at immunizing for only one or a few diseases had up to six times higher costs per additional life saved than total immunization programs. Walsh and Warren (1979), Faruqee and Johnson (1982), and Barnum and Yakey (1979) put the cost of primary health care interventions per additional life saved at between US$25 and US$508. Shepard and others (1986) estimate the average cost of diarrhea treatment at US$300 per additional life saved. Barlow and Grobar (1985) estimate the cost of a malaria control program at US$69.95 per additional life saved. Walsh and Warren (1979) estimate the cost of a malaria control program at $892.20 per additional infant life saved; basing the cost on overall reductions in mortality would have reduced the cost per additional life saved. Cost per additional life saved for vector control programs is inversely related to the case fatality rate of the diseases and is therefore higher for diseases such as schistosomiasis, onchocerciasis, ascariasis, and ankylostomiasis. However, economic benefits in terms of improved productivity and reduced nutrition and health care needs are high.

/a Includes both nongovernment and public spending. Data on private spending are available for only a limited number of countries. Figures here assume 90 percent of private spending is for curative care and 10 percent is for preventive care.

Source: World Bank (1987d) p. 19

Social Security

Health Benefits. To the extent that the principal purpose of social security health programs is to share risks associated with illness, a Bismarkian social security system is limited in its appropriateness by its inability to cover the self-employed and poor. They may face the greatest risks epidemiologically, because their income is more variable, and because

Table III.1: Share of Health Expenditure by Category
(Percent)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Argentina									
Medical Serv.	55	56	53	58	58	57			
Environ. Health	37	32	33	27	28	28			
Other	8	11	14	15	14	15			
Bolivia									
Cochabamba									
Administration					42	28	19	25	14
Primary					13	12	9	19	19
Hospital					46	61	72	61	66
La Paz									
Administration					10	11	13	6	6
Primary					35	31	33	37	28
Hospitals					55	59	55	66	66
Santa Cruz									
Administration					16	10	11	9	9
Primary					34	16	20	14	24
Hospital					50	74	69	68	68
Chile									
Personnel	37	37	35	35	36	36	37		
Supplies	21	19	21	23	23	23	23		
Redemp. Voucher	20	23	23	24	22	22	21		
Subsidies	7	7	6	4	4	3	4		
PHAC	6	7	7	6	8	7	6		
Invest	4	3	2	1	2	2	2		
Other Expenses	6	5	6	7	5	6	8		
El Salvador									
Administration	22	22	20	17	15	16	18	16	
Reg. Health Serv.	21	24	23	23	21	23	27	22	
Hospitals	37	40	38	38	34	41	43	36	
Other Decentral.	3	3	3	3	3	4	4	3	
Investment	16	12	16	19	28	17	9	23	
Jamaica									
Administration	28		15		7		5		
Primary	20		16		18		21		
Sec. & Mkt.	46		63		69		66		
Paramedical	3		4		4		6		
Training	3		2		2		2		
Venezuela									
Total				100				100	
Curative				77				85	
-in hospital				64				71	
-outside hospital				12				14	

Sources: Argentina data from World Bank (1987a), p. 75; Bolivia data from World Bank (1989c), p. 47; Chile data from Castaneda (1989b), p. 110; El Salvador data from Castaneda (1989a), Table 4; Jamaica data from World Bank (1988c), p. 41; and Venezuela data from Riboud (1989), p. 29.

they have little wealth to help them withstand shocks to their income. From a risk-sharing point of view it may be more appropriate for the government to be the provider or financier of health care for all, rather than to have social security provide coverage mainly for the upper end of the income distribution. A public health system open to all would better protect the poor against risks of illness than social security. This is

the choice that Jamaica and other non-Latin Caribbean countries have made. The expansion of social security health coverage to nearly universal levels in Chile and Costa Rica has much the same effect. In the countries with smaller social security health systems, such as Bolivia, the Dominican Republic and El Salvador, the duplication of infrastructure between ministerial and social security systems is wasteful and undesirable from an external efficiency point of view.

Pensions. Changes in the choice of financing mechanism for social security pensions have been widespread as the number of countries with social security systems grew, and as the systems matured. Since its foundation in the 1920s, social security in Latin America has changed form, from predominantly fully-funded, to partially-funded systems, to the predominance of pay-as-you-go-schemes.[11] Which form is preferred depends upon the relative importance of various goals and features of a particular economy. There is not a consensus in the field about which form is preferred in general. It would seem, however, that the apparently irresistible tide that has eroded the capital of the funded schemes signals a weakness in the system.

The switch from funded to pay-as-you-go schemes has been forced by the pervasive inability of social systems to limit their benefits to affordable levels. Causes for fast growing expenditures have been universalization of coverage, too liberal entitlement conditions (including low ages of retirement) and generous benefits (including cost-of-living adjustment of pension), and maturation of pension programs with a growing number of pensioners who live and collect pensions for longer than anticipated. Revenues were less than anticipated because of the incorporation of low income groups, increasing rates of pensioners to contributors, employers' evasion and payment delays aggravated by inflation, political-economic obstacles to raising the contributions or taxes further, and low (or real negative) capital returns due to poor investment policies and high inflation rates (Mesa-Lago 1989c pp. 1-11, Mesa-Lago 1989a).

Though several of the factors that, even before the present decade, were leading to crisis in social security systems are exacerbated by economic depression and fiscal constraints, there is little specific evidence about how important the crisis of the 1980s has been in social security. In Bolivia, the decline in formal sector employment led to a decline in coverage, and contributing workers, from 26 to 22 percent of the

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11/ Fully-funded programs attempt to maintain the financial equilibrium for an indefinite time by means of a fixed contribution or premium that is actuarially calculated to finance estimated future pension obligations based on demographic, economic and other factors. Partially funded schemes maintain financial equilibrium for a given time period (for example one decade) and then review the parameters and recalculate required contributions. In pay-as-you-go systems, the equilibrium is usually annual, so that current workers pay for current pensions with no capitalization fund.

labor force. High inflation eroded the value of assets, delayed payments, and the real rates of return to investment. Argentina's inflation rate reached nearly 700 percent in 1984, Brazil's 800 percent in 1988, Bolivia's reached 24,000 percent in 1984. Facing growing deficits in Argentina, the social security administration let cost of living adjustments slip from the 82 percent mandated by law to 45 percent of price increases. When law suits brought by affiliates were successful, it was calculated that to fully compensate them would require a sum as large as the total foreign debt. In Jamaica, the real value of pensions grew steadily from 1979 to 1983. Then from 1983 to 1986 it fell by 40 percent.

Whether caused by the long term movement to unsustainable systems or precipitated by the economic crisis of the 1980s, there is growing awareness of the imbalances in many of the region's social security systems. Costa Rica's as yet unsuccessful attempts at reform have been predicated on adjustments to improve actuarial balance within the current system. The failure to solve recognized problems illustrates the political difficulty of achieving what are technically simple changes. Chile, in contrast, has radically changed its whole system. These two cases are sketched in the following paragraphs as illustrative contrasts. Studies and proposals to improve actuarial balances are also underway in Argentina and Brazil. In 1987, Bolivia restructured the financing of its systems, separating the financing of health and pension benefits, and providing for uniform contribution rates. The effects on the financial viability of the institutions has not yet been worked out. It would seem that these may lay the ground work for further reforms later.

Two main problems confront Costa Rica. The first is that the nineteen "special regimes" are very inequitable, overly generous in benefits, and incur large state subsidies. Both financial and equity concerns indicate that these regimes should be brought more closely into line with the general national social security system. In these regimes the average length of retirement is between 26 and 29 years, almost equal to the length of employment. From 1982-86 the average real pension in these regimes grew by 20 percent annually, while in the national social security system in grew by 5 percent. Although the special regimes account for only 16 percent of the covered population, they pay 42 percent of pension benefits. In 1985 a law was passed proposing that all public employees could shift from the system with which they were affiliated to the most generous of all the special regimes. The law included the proviso that it should only take effect if a subsequent actuarial study showed the change to be sustainable. The resulting study showed that the actuarial value of the pensions would be 135 percent of the salaries. The law was therefore revoked, but no serious attempts have yet been made to curb the special regimes that are imposing a large and growing burden on general government revenues.

The second problem confronting the Costa Rican social security system is that, while fundamentally sound and equitable, the national pension system has become actuarially unbalanced. Studies in 1946, 1949 and 1957 showed balance. New studies were performed in 1980 and 1985 that showed imbalance. The 1985 study was the first that concluded that the

contribution rate must be raised from the 7.5 percent level established at the system's beginning. The 1985 study, and an update and extension in 1986 proposed raising the contribution rate, gradually raising the retirement age, limiting rates of growth of pension benefits and salary levels, and improving rates of return on investments. To date the contribution rate and retirement ages are unchanged, the growth of pension benefits and salary levels significantly above that recommended, and rates of return on investment lower. Although the need for changes was clearly documented and accompanied by administratively feasible suggested reforms, the need for reducing benefits and/or raising revenues has been too politically unpalatable for such changes to be made (Mesa-Lago, 1988).

In 1981, Chile fundamentally restructured its social security system. A fairly traditional pay-as-you-go system, with three large and many small public sector institutions, was replaced by a fully funded system of privately managed funds for pension administration. The new law mandates minimum contribution rates of 10 percent, regulates the pension funds, provides guarantees of minimum returns on deposits, and minimum pensions for those whose accumulated funds are insufficient for that minimum. The compulsory contribution is put in an individual passbook-like savings account that is not transferrable, protected from law suits and tax-free. Workers may choose to contribute more than the required 10 percent. They choose the company that will administer their funds, and may transfer their pension savings from one administrator to another. The state provided "recognition bonds" based on accumulated contributions for workers transferring from the old system to the new. By 1988, 74 percent of the civilian labor force participated in the new system, and only about 12 percent of the employed labor force in the old system.

The reform has entailed a large fiscal cost to cover deficits in the old system, pay the recognition bonds, pay the supplement to the minimum pensions, and meet government obligations arising from performance guarantees. The cost of covering the old system's deficits and the recognition bonds will range between about 4 and 5 percent of GDP from 1986 to 2000, after which it will decline markedly. The net fiscal cost is much lower, because the subsidization rate of the new scheme is lower than the old system. In the long run, it is expected that the pensions will be higher under the new system (despite the lower contribution rates) as a result of better administration, higher returns and the complete indexation of accumulated funds (Casteneda, 1989).

Section B: Internal Efficiency

Education

Although highly imperfect, the available indicators of internal efficiency in education indicate that there is significant room for improvement. The evidence of changes in internal efficiency is mixed and weak. Consequently, it seems unlikely that there have occurred gains in internal efficiency sufficient to offset reduced funding levels. Class sizes could be increased significantly in all countries. Provision of teaching materials is low. Repetition adds significantly to the burden of schooling.

Box III.2: The Changing Price of Teachers

This report implicitly assumes that relative prices are constant, i.e. if the real resources available to education have declined by 20 percent, the inputs which the ministry of education can purchase must have decreased by 20 percent. However, if the price of teachers had also decreased by twenty percent, then the ministry could afford to pay for just as many of them. Changes in real wages relative to other prices in the economy will have a very large impact in education budgets since over half the budget, and sometimes as much as ninety-nine percent of it, is devoted to salaries. In health, the wage bill is typically the largest expense category. Many pharmaceuticals are imported, and receive a fairly large share of budgets, so the price of foreign exchange is of concern. Comparisons of the relative changes in the price of the principal inputs and the budgets will refine somewhat the assessment of the adequacy of resources.

Most of the country studies report falling real teachers' wages. Moonlighting, demoralization, and abandonment of the sector are attributed to the falling wage. Moonlighting and demoralization may indeed be symptoms of falling real incomes, but teachers' decisions to leave teaching will be based on the comparison with how much their wages have fallen relative to wages for other jobs they could hold. Comparisons of relative changes in teachers' wages and other wages in the economy will inform an assessment of the problem of teachers leaving education.

Table B.III.1: Wage and Budget Indices in Costa Rica

Costa Rica	1980	1981	1982	1983	1984	1985	1986	1987
Teachers Salaries								
Primary	100	..	..	..	..	66	66	70
Secondary	100	..	..	..	..	60	59	65
Budget Index	100	83	63	65	69	68	70	70
Ave. Earning of Salaried Workers	100	85	63	77	..	92	95	..

Source: Teachers' salaries, Bank Economic and Social Data Base; Budget, Table A.III.8; Average Earnings, "Household Surveys of Employment and Unemployment", Dept. Of Statistics and Census, San Jose, Costa Rica, Various years.

In Costa Rica, the index of teachers' salaries is always slightly below the index for the total education budget. Thus the reduction in the budget resources, coupled with the change in the price of teachers, has allowed the ministry to hire about the same number of them. Indeed, it may be more accurate to say that the budget and number of teachers determined the wage, rather than the budget and wage determined the number of teachers. Some would go so far as to attribute the resilience of social expenditures to the difficulty of laying off workers or lowering the wages (see Hicks and Kubisch, [1983]).

For 1985 and 1986, the only years when comparable information is available, the wage indices for teachers are

In the absence of better measures of internal efficiency, we examine a series of indicators that should affect internal efficiency.[12] These are the student-teacher ratio, the share of teaching materials in the education budget, repetition rates and the few test scores available.

Student-teacher ratio. In the 1980s the average student-teacher ratio in each country has been in the range in which the quality gains of very small classes have been sacrificed, but the efficiency gains of large size not fully realized.

As an efficiency measure, a higher student-teacher ratio is better than a low ratio. The student-teacher ratio is sometimes interpreted as a measure of quality. In that case a low ratio is usually preferred. Several studies reviewed in Lockheed (1989) indicate that reductions in the ratio have little impact on quality until a class size of about twenty or smaller is reached. In higher ranges small changes in class size do not increase learning. Replicated throughout a school system, however, they can be quite expensive. The policy paper therefore concludes that increases in class size up to about 50 will improve efficiency without affecting quality.

The evidence with respect to trends is mixed and tenuous, but in the majority of cases, the student-teacher ratio is falling, which indicates a decrease in internal efficiency. In Bolivia and Costa Rica the primary student-teacher ratio has increased, while in Brazil, the Dominican Republic, El Salvador, Jamaica and Venezuela it appears to have fallen slightly. At the secondary level, the student-teacher ratio has increased in Argentina and the Dominican Republic, and has decreased in Costa Rica and Jamaica (see Table III.2).

Materials. Materials such as textbooks, exercise books, maps, and even library and laboratory materials are among the most cost effective inputs to schooling (Fuller and Heynemen, 1989; World Bank, 1986a). The percentage of the budget spent for materials is very low in all of the countries. In no country or year is it above eight percent, and it is usually half of that or less. (See Table III.3). No clear pattern of

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12/ Measurement of internal efficiency in education is a thorny issue. The goal of education is both to impart a set of facts, and to teach skills. Measuring progress on either front requires testing of the student. Testing is a science not yet so developed as to escape controversy, so that even where available, test scores are not always easy to use or interpret. Furthermore, test scores from comparable sets of examinations are not available for most countries and years. We therefore do not try to link measures of ability or learning to costs to measure internal efficiency. If passing a grade of school can be taken to mean that a specified amount of learning has been achieved, then the cost per year per child promoted would be a good measure of internal efficiency in education. It is conceptually much easier and does not require testing information. The country studies, however, do not report the cost per year per child promoted.

Table III.2
Student Teacher Ratio

COUNTRY	1979	1980	1981	1982	1983	1984	1985	1986	1987
PRIMARY									
Argentina	18.5	..	20.2	..	..	..	..	..	..
Bolivia	..	20.0	22.7	..	..	25.0	..	25.4	27.0
Brazil	25.5	25.6	23.8	24.5	24.3	24.4	23.8	..	..
Chile	33.7	..	..	33.4	..	..	..	..	..
Costa Rica	26.7	27.7	33.0	31.6	31.9	33.8	31.5	32.3	31.5
Domin. Rep.	..	..	51.8	46.3	54.4	34.2	35.1	33.7	..
El Salvador	..	48.0	40.7	45.4	48.3	41.8	..	..	44.5
Jamaica	41.4	41.4	..	..	..	..	..	35.9	..
Venezuela	27.8	27.3	26.7	26.4	26.4	26.0	25.6	25.7	26.1
SECONDARY									
Argentina	7.4	..	6.7	..	7.7	7.6	7.6	7.9	..
Costa Rica	20.7	21.5	21.7	18.9	18.4	..	..	19.3	19.4
Domin. Rep.	..	..	..	..	..	36.8	37.3	42.9	..
El Salvador	..	13.5	12.5	..	..	..	..	..	..
Jamaica	32.9	32.9	..	..	29.3	..	..	28.5	..
Venezuela	..	17.3	..	..	..	17.4	..	..	17.5

Source: Bank Economic and Social Data Base; Social Indicators Data Base and own calculations; Venezuela 1987 figure from G. Marquez (1990), Table A-14.
.. indicates no data available

change is apparent from standard international sources, although the country studies signal cases in which expenditures for, or provision of, materials is falling. In Bolivia, spending on materials has fallen to one tenth of a percent of the recurrent budget. In Venezuela between 1980 and 1984, government distribution of school textbooks fell by 88 percent, distribution of notebooks fell 92 percent and distribution of pencils fell 95 percent. Jamaica introduced textbook distribution programs that by 1989covered about two thirds of primary students and about 40 percent of students in the lowest quality track of the secondary system.

Table III.3 : Expenditures on Teaching Materials as Percent of Current Expenditures on Education

	1980	1981	1982	1983	1984	1985	1986
Argentina	7.9	..	5.3	..	..	..	0.5
Bolivia	0.0	0.8	0.0	..	..	..	..
Chile	5.1	6.0	..	..	..	..	..
Costa Rica	0.2	..	0.5	0.4	0.5	0.0	0.0
Domin. Rep.	0.0	..	0.0	0.0	0.0	0.0	0.0
El Salvador	..	..	..	..	..	..	..
Jamaica	2.2	..	..	3.8	3.1	2.6	..
Venezuela	1.0	0.8	1.1	1.1	4.5	..	..

Source: Bank Economic and Social Database; UNESCO and UNESCO Financial Statistics Database.
.. indicates no data available

Repetition Rates. Repetition is an important sign of inefficiency in a school system. If a child has to repeat grades, s/he will need more total years of schooling to become literate and numerate or to complete a level of schooling. The extra years of schooling add to the burden on the public budget. They also incur additional years of opportunity cost on the family for the foregone labor time of the child.

During the first half of the decade repetition rates have fallen or been constant for most of the countries in the sample (see Table III.4). Repetition rates declined the most in the Dominican Republic (down five percentage points) followed by Argentina (three percentage points) and Chile (two).[13] Repetition rates have been about constant in Brazil, Jamaica and El Salvador. Costa Rica stands out as the only country in which repetition rates rose strongly. Venezuelan rates may have increased also but given the contradictory data available no conclusions can be drawn.

Test scores. The small amount of evidence available on test scores (See Appendix VII) shows that a decrease in efficiency has occurred. In Chile, test scores for fourth graders in both municipal and private, subsidized schools declined between 1984 and 1988. In Jamaica, the percentage of students passing the Secondary School Completion exam was generally slightly lower in 1985 than in 1980. There is, however, no steady downward trend in passing rates: the percentage of students passing the business exam almost double between 1980 and 1981 and then fell. In the science, mathematics and industrial examinations, the percentage of students with passing grades reached its highest point in 1983 and then fell. Only in mathematics was the percentage of students passing the examination higher in 1985 than 1980 (even though only one percent passed).

Table III.4: Repetition Rates in Primary Education

	1981	1985
Argentina	11.2	8.1
Bolivia	10.8	11.1
Brazil	18.1	18.8
Brazil[1]	20.2	19.7
Chile	16.5	14.5
Costa Rica[1]	7.9	10.6
Domin. Rep.[1]	18.0	12.8
El Salvador[1]	8.8	8.4[a]
Jamaica[1]	3.9	3.9[b]
Venezuela	16.5	22.1
Venezuela[1]	9.8	9.4

Source: Schiefelbein (1988) and UNESCO (1988)

[1] From UNESCO; except for El Salvador, data in first column for UNESCO is for 1980.

[a] 1984

[b] 1986

In summary, there is no clear pattern among the indicators of the internal efficiency of the education system. The evidence available shows that there is room for improvement. What is less clear is whether improvements have been achieved in the decade. Given the weakness and contradictory evidence available, it is unlikely that the impact of reduced expenditures has been offset by increased internal efficiency in their use.

13/ In Chile, a change in promotion policy may explain part of the change.

Health

Available administrative indicators of the intensity of input use indicate large internal inefficiencies in health care provision in the nine countries in the 1980s. Very little trend information is available, but there is not evidence of large improvements and, in fact, some hints at deterioration in internal efficiency.

The conceptually appropriate measures of efficiency in health care would be the cost per medical action. Such calculations are complicated and not available. The measures obtainable from standard institutional statistics are those related only to the intensity of use of inputs, rather than those related to medical actions. The most commonly used intensity measures are the nurse-doctor ratio, hospital occupancy rates, average length of hospital stay and number of consultations per medical staff.

Nurse-Doctor Ratio. Data from the Pan-American Health Organization (PAHO) indicate significant and worsening inefficiency in the mix of human resources employed in the public health sector. PAHO recommends a nurse to doctor ratio of between two to four nurses per doctor. If the ratio is lower, it implies that doctors, which cost more to train and to pay, will have to perform tasks for which nurses are adequately skilled. In Jamaica the number of nurses per doctor increased from 1980 to 1984, and was constant in Brazil and the Dominican Republic (see Table III.5)[14]. In the other six countries, the nurse-doctor ratio fell. Only in Jamaica is the level reasonable, around three to one. In 1984 in El Salvador, the ratio was one to one. In the other countries the ratio was one-half to one or less.

Table III.5: Nurse per Doctors

Country	1974	1980	1984
Argentina	0.27	0.26	0.17
Bolivia	0.34	0.30	0.26
Brazil	0.13	0.22	0.22
Chile	0.58	0.53	0.25
Costa Rica	0.85	0.76	0.51
Dominican Rep.	0.13	0.15	0.15
El Salvador	1.12	1.31	1.00
Jamaica	4.71	2.97	3.22
Venezuela	0.67	0.54	0.37
Latin America	2.01	1.95	2.00
Caribbean	0.00	0.00	0.00

Source: PAHO (1988), pp. 22-39, 58-72 and own calculations.

Hospital Indicators. On hospital related measures of internal efficiency Costa Rica and Chile rate very well. Argentina, Bolivia and the Dominican Republic rate poorly.

The recommended hospital occupancy rate is 80 percent. This indicates that few resources are idle, but allows for adequate handling of

14/ The data on health personnel, "...for the majority of countries...reflects the availability of resources in the Public Sector." PAHO, 1988, p.21.

peak periods. Table III.6 shows that hospital occupancy rates in Argentina and the Dominican Republic are substantially lower than optimal. They are about optimal in Costa Rica and Chile. For Bolivia, nation-wide statistics are not available, but anecdotes of hospitals running at as low as 20-30 percent of capacity abound. In Jamaica, a shortage of nurses willing to work at government salaries has forced the closing of several wings of hospitals, with a consequent underutilization of total physical capacity, but overcrowding of beds in operation.

Table III.6: Gross Indicators of Hospital Efficiency in Some Latin American Countries (1979-1985)

Countries	Sector	National Averages of: Hospital Use (percent)	Length of stay (days)
Argentina (1980)	Public	60.6	7.5-26.9/a
Costa Rica (1985)	Social Security	81.0	6.3
Chile (1985)	Both	75.3	8.5
Dominican Rep. (1985)	Social Security	51.7	10.4

Source: Mesa-Lago (1989a), p. 124.
/a Extreme variation among provinces.

The recommended average hospital stay varies according to the type of hospital. For maternity hospitals it might be two or three days. For chronic care facilities such as mental or tuberculosis facilities, it might be much longer. Across all kinds of facilities, an average of about 7-8 days would be desirable. For Argentina and the Dominican Republic, the averages are again worse than the norms. For Costa Rica and Chile the averages and the norms coincide.

Patient Consultations. WHO/PAHO recommends that a physician should see four patients an hour. Only the Bolivia country study reports information on patient consultations, and that only for a single year (see Table III.7). Patient consultations per hour of medical staff time were extremely low. The overall average was .11 patients per medical hour in Ministry of Health facilities, .23 in social security facilities, and .38 in NGO facilities. Consultations were much higher in health posts than clinics or hospitals.

Table III.7: Number of Consultations per Staff per Hour by Three Types of Organizations in Cochabamba, Bolivia

	Post	Center w/o beds	Center w/ beds	Hospital	Average
Ministry	0.29	0.45	0.20	0.06	0.11
Social Sec.	0.46	0.29	0.38	0.17	0.23
NGOs	0.70	NA	0.37	0.17	0.38

In brief, there is almost no trend information available for internal efficiency in health, but the level appears to be alarmingly low. Clearly efforts to improve internal efficiency are needed.

Social Security

Even taking into account that economies of scale may not be fully realized in the smallest countries, or in countries with limited coverage, there is room for improvement in administrative efficiency in social security in several countries. The share of the social security budget devoted to administrative expenses in the nine countries reviewed here ranged from 3 percent to 22 percent in 1983-86 (see Table III.8). By way of comparison of levels, in the industrialized countries of Europe and North America, the range for administrative expenses is from 2 to 4 percent. There is no numeric trend information presented, but Mesa-Lago (1989a) reports that for his larger sample of Latin American and Caribbean countries, the share of administration rose in almost all cases between 1977 and 1980. From 1980 to 1983 the administrative share rose in only about half of the countries. It is interesting to note that in Chile the operational costs per beneficiary have declined by almost half between 1982 and 1987 as the volume of transactions handled by the privately administered pension funds increased and certain burdensome administrative requirements were adjusted by the government.

Table III.8: Administrative Efficiency of Social Security in Latin America, 1983-87

Country	% Admin. Expenses in Total 1983-86	Employees per 1000 Covered Persons 1980-87
Argentina	3.4	n.d.
Bolivia	14.5	6.7
Brazil	6.8	n.d.
Chile	8.2	n.d.
Costa Rica	5.0	13.0
Dominican Rep.	22.0	20.5
El Salvador	13.7	13.5
Jamaica	12.8	0.6
Venezuela	17.6	4.1

Source: Mesa Lago (1989a), p. 114.

A contributing factor in the high administrative costs is the multiplicity of institutions offering social security services. The most common divisions are by sector of employment, and sometimes a division between the entity in charge of medical benefits and that in charge of pension benefits. The problem is widespread, but two cases are illustrative. In Argentina, there are 300 obras sociales, or health insurance schemes, mostly tied to unions. The fifty largest account for 93 percent of affiliates; the thirty largest have their own service delivery infrastructure. Bolivia has twenty-nine social security institutions, several of which operate separate health infrastructures. The duplication and waste of resources implied is serious. In Sucre, Bolivia, for example, the national social security fund has a hospital operating at 30 percent of capacity, while down the street the railroad workers' social security fund has its own hospital operating at 15 percent of capacity. The duplication of physical overhead is less expensive in the pension funds, but still considerable.

The rate of return to the investment portfolio of social security funds is generally quite low. Chile is the only country from an eight country study (Bahamas, Barbados, Chile, Costa Rica, Ecuador, Jamaica, Mexico and Peru--[Mesa-Lago 1989c]) with an acceptable return. From 1981-1987 in Chile, the real return was 13.8 percent on the newly established fully-funded schemes. This was better than the short and medium term bank deposits in all periods save one, and substantially above the short and medium term rates averaged over the period (6.2 and 8.5 percent). In Costa Rica and Jamaica, in contrast, real returns from 1980-1987 were negative, -10.5 and -4.8 percent, respectively. This can be attributed largely to the instruments in which the funds are invested. In Jamaica, 91 percent of the social security funds are in government bonds with negative real yields. In Costa Rica, government bonds have been increased from 24 to 44 percent of the portfolio during the 1980s. While bonds are still a low yield investment, they are better than the nominally defined government debt that they are replacing. Costa Rica has also instituted several other positive changes in portfolio management over the 1980s.

Although there is little trend information available for internal efficiency in social security, there is substantial evidence of chronic administrative inefficiency. This is very similar to the assessment for health. The assessment in education is somewhat more encouraging. The statistical evidence from each sector reflects the need for internal reforms and improvements, but does not show that they have occurred. Nonetheless, there have been several attempts in the region to improve efficiency. Our statistics are not, however, adequate to measure their impact. They are therefore reviewed anecdotally in the next section.

Section C: Managing Change in the Social Sectors

The fiscal constraints of the 1980s and the gradual change in thinking about the appropriate role of the state in the economy have produced some innovations in the management of the social sectors that show promise. A handful of the innovations geared to increasing the efficient use of scarce resources are reported briefly here. The aim is to illustrate the key themes and provide references to some experiences that should be examined if similar reforms are proposed elsewhere.

Decentralization

Decentralization is receiving much attention in Latin America and in several important international agencies. The argument for decentralization is based upon four ideas: (i) local managers have a better information base than do central staff, e.g. they know that Fulano de Tal is shirking and should be fired, or that for the moment bandages are more needed than pharmaceuticals; (ii) the community, people or masses are better able to determine their needs than distant government bureaucrats; (iii) local managers are more responsive to the community than the central

administration; and (vi) when the community influences programs they are more likely to use them and to contribute time or money to their support.

In Jamaica, the administration of the hospital user fee system illustrates a case of decentralization to the institutional level. Hospital user fees were first introduced in the early 1960s but redesigned in 1984. Prior to 1984 all revenues from the fees went to the central tax coffers, and budgets were reduced by the amount collected. In 1984, with the revision of the fee schedule, hospitals were allowed to retain 50 percent of all revenues without their budget allocations being reduced. Recently the Ministry of Health has agreed to allow hospitals to claim the second half of their revenues as well. Detailed budgeting of the expected revenue needs to be approved centrally and disbursement requests and actions are sometimes delayed. Nonetheless, one of the hospitals surveyed showed a significant increase over time in the revenues it collected from J$110,000 in 1982/83 when it had no authority over the money, to J$400,000 in 1984/85 when it had the use of half the revenue, to J$840,000 in 1987/88 when it had control over the full value of revenues. (Lewis [1988] pp. 103-8)

Chile has decentralized its education sector to the local level. The reforms consisted of transferring schools to municipalities that now have complete autonomy to administer the infrastructure, personnel and procurement of goods and services, and the introduction of a financing mechanism whereby fiscal resources are transferred on the basis of payments per student enrolled. The latter is equivalent to a voucher (or subsidy for demand) system that applies equally to private schools that want to provide free education in competition with municipal schools. The quality of education and internal efficiency of the system appears to have improved. Promotion rates in fiscal/municipal schools have increased appreciably since 1973, while the drop-out rate has declined considerably.

The implementation of the reform was not without difficulties. A legal mechanism for the transfer of state property had to be created. The teachers opposed the decentralization because they lost their status as civil servants and the power of their union was reduced with the fragmentation of the hiring and pay decisions. Municipalities at first were unaccustomed to the responsibility and ran deficits that had to be covered centrally. The first schedule of transfer rates did not adequately take into account the higher per student costs in rural areas. The implementation of the program was interrupted in 1982-83 when the fiscal crisis limited the severance payments assigned to teachers being decentralized, and the bonus to municipalities granted for early acceptance of the transfer. (Castaneda [1989] pp. 14-37)

Contracting Out

The public sector may need to be involved in some activities to assure that optimal levels of them are provided. This is the case for public goods, such as immunization programs, vector control, or primary education. In other cases, the public sector may be involved not because the private and public returns are different, but in order to ensure that

the poor have access to the services. This, and risk sharing, are, for example, the principal justifications for government provision of curative health care. In order to assure that optimal levels of such goods are provided, the government usually chooses to provide the service itself. This is not strictly necessary. For most kinds of services, the government can achieve the same goals by merely financing the service, with the actual provision of the service contracted out to the private sector. An important aspect of competition can be introduced through appropriate contracting procedures.

In Jamaica, limited experiments in contracting out some functions have met with success. In pilot hospitals, janitorial, catering and laundry services have been contracted to private firms. The quality of service has improved markedly and the cost has fallen. Based on success in the pilot projects, the number of hospitals contracting out some of their functions is increasing.

In Bolivia, the Ministry of Health has decided that rather than supervise the construction and remodeling of health posts itself, it will contract the task to another public sector body, the Social Investment Fund, which has greater expertise in construction and financial monitoring.

In Chile, contracting out has been used on a much larger scale. The voucher scheme in education works like a contracting system when used in private schools. In health, a similar voucher scheme operates. Individuals have the choice of using public clinics or of claiming vouchers that can be presented to private physicians in (partial) payment for services. The social security system has been largely privatized with old-age, disability and survivor pensions now being provided by for-profit pension companies and private insurance companies.

User Fees

User fees link the receipt of a service directly to a payment. The payment is frequently only a portion, sometimes a small portion, of the cost of the service's provision. User fees are useful for several purposes--they generate revenues from those who benefit from services; they discourage overuse of services; they serve as a signaling mechanism. As a signaling mechanism differential fees can guide consumers into services the government wishes to encourage, e.g. preventive health care, or use of clinics rather than hospital out-patient facilities. Consumers signal through their preferences for quality and services by paying for them where available. In establishing user fee schedules exemptions should be available so that the poor are not denied access to basic services.

The importance of user fees has grown markedly in some countries and sectors. In the Bolivian public health care system user fees have not been officially espoused or designed as a tool to improve the efficiency of the sector. However, as public resources available to hospitals plummeted, they individually began to rely on user fees, to the point that cost recovery provided up to three quarters of a few hospitals' operating budgets in some years. For the public health sector overall, the share of

cost recovery in total resources rose from 6 percent in 1984 to 22 percent in 1988. Although each health facility has some procedure for exempting those unable to pay the fee, there is the possibility in Bolivia that some of the poor have been priced out of the system. In Jamaica, an overhaul of health policies has deliberately included user fees for drugs and hospital services as a means of increasing efficiency in the system. Preventive and primary services are still free, and fees are waived for children under five or in school uniform, pregnant/lactating mothers, and recipients of food stamps, Poor Relief, or Public Assistance. The amount of revenue raised through user fees is still low, about three percent of the total public hospital budget in 1986 (Lewis 1988 and 1989).

Integration/Division of Institutions

A further tool used in the attempts to improve social service delivery has been the re-organization of institutional mandate. Coordination or integration of different organizations can reduce overlap or incomplete coverage of duties or beneficiaries and lead to better sectoral results. The division of health services in Costa Rica into primary care (under the Ministry of Health) and curative care (under the Social Security Institute) is the result of an effort begun in the 1970s to coordinate different health organizations and reduce the provision of overlapping services.

In a few cases, the division of multipurpose organizations into several, single-purpose organizations can contribute to increased efficiency. Each new, single-purpose organization is better able to focus attention on its purpose and is also able to better coordinate with other institutions of like purpose. Such is the intention of the division of the Bolivian social security system into separate entities for health and pension programs.

This review of the best evidence available on the efficiency of social service provision shows that while there is considerable room for improvement, there is little evidence that improvements have occurred. This is at least partly due to the paucity of data rather than to the absence of improvement. The following chapter reviews social indicators that should be affected by the efficiency of social service delivery.

Chapter IV: Social Indicators

The fruit of productive investment in the social sectors should be seen in improvements in social indicators. The extent to which the indicators respond depends upon the efficiency and equity of spending, as well as its level (and a host of factors outside the present analysis, which will be considered briefly in the next chapter). This chapter examines the changes in social indicators in these nine countries during the 1980s.

There are some instances in which in the 1980s social indicators decline, or improve at a slower rate than in the 1970s in these nine countries. The most disturbing instance is the fall in the net primary enrollment rate in Costa Rica and El Salvador. The minimal progress in lowering under five mortality in the Dominican Republic and Venezuela is cause for concern. For the other indicators and other countries, indicators and their evolution are quite positive. Under-five mortality, malnutrition and vaccination rates are all improving. The next chapter explores the paradox of mostly improving social indicators and mostly falling social expenditures.

Health Indicators

Under-five Mortality. Under-five mortality reports the number of children who die before their fifth birthday, usually expressed as a number per 1000 live births. UNICEF considers it the best indicator of social development because "it reflects the nutritional health and health knowledge of mothers, the level of immunization and of use of oral rehydration therapy, the availability of maternal and child health services, income and food availability in the family, the availability of clean water and safe sanitation and the overall safety of the child's environment" (UNICEF, 1989, p. 82).

According to UNICEF's State of the World's Children, 1989 under-five mortality rates declined from 1980 to 1987 in all nine countries in this study (see Table IV.1). They also declined from 1960 to 1980. The rate of decline in the 1980s was greater than that

Table IV.1: Under Five Mortality Rates and Rates of Reduction

	Rates			Average Annual Rate of Reduction (percent)	
	1960	1980	1987	1960-80	1980-87
Argentina	75	46	38	2.41	2.69
Bolivia	282	207	176	1.05	2.29
Brazil	160	103	87	2.18	2.38
Chile	142	43	26	5.80	6.93
Costa Rica	121	31	28	6.58	4.17
Dominican Rep.	200	102	84	3.31	2.74
El Salvador	206	110	87	3.09	3.30
Jamaica	88	29	23	5.40	3.26
Venezuela	114	50	45	4.04	1.49

Source: UNICEF, (1989), pp. 88-89.

from 1960-80 in Argentina, Bolivia, Brazil, Chile, and El Salvador. The rate of decline in under-five mortality slowed in Costa Rica and Jamaica. This is not of concern, as by 1980 these countries had achieved rates of 31 and 29 deaths per 1000 live births, respectively, and in 1987 rates of 23 deaths per thousand live births. Further improvements will be difficult to achieve as the rate approaches the lowest level obtainable (7 under-five deaths per 1000 live births has been achieved by Sweden and Finland). In the Dominican Republic and Venezuela the rate of progress in reducing under five mortality slowed, although neither country has achieved near-minimum levels yet. In these two cases, slowing progress in reducing the under-five mortality rate signals the need to re-examine the countries' health policies and expenditures. The under five mortality rate is falling in all countries in our sample. The rate of fall has slowed in two countries where the limiting factor in progress does not appear to be biological, and in two countries where the limiting factor does appear to be biological.

Hill and Pebley's under-five mortality data are (1989) more restricted than UNICEF's, but are of higher quality (see Table VI.2). In all six of the countries for which they present data, under-five mortality rates fell from the 1975-80 to 1980-85 observations. In Argentina, Costa Rica and the Dominican Republic, the rate of decline was lower in the last quinquenium than in the preceding.

Table IV.2: Hill & Pebley Under 5 Mortality Rates

	Deaths per 1000 Live Births 1960-65	Between Period Reduction %	Deaths per 1000 Live Births 1965-70	Between Period Reduction %	Deaths per 1000 Live Births 1970-75	Between Period Reduction %	Deaths per 1000 Live Births 1975-80	Between Period Reduction %	Deaths per 1000 Live Births 1980-85
Argentina	72	5.6	68	14.7	58	17.2	48	12.5	42
Bolivia					244				
Brazil	152	8.6	139	10.1	125	14.4	107	19.6	86
Chile	136	17.6	112	29.5	79	34.2	52	46.2	28
Costa Rica	112	21.4	88	27.3	64	45.3	35	31.4	24
Dominican Rep.					132	25.8	98	10.2	80
Jamaica	77	19.5	62	22.6	48	33.3	32		
Venezuela									

Source: Hill and Pebley (1989), Table 2.

How much can be made of these rates of reduction in under five mortality rates is doubtful. The UNICEF levels are largely based on projections or interpolations, and hence the trends are driven partly by modelling procedures rather than by information. The Hill and Pebley data present, for the figure labeled 1980-85, an observation for whatever year during that period a reliable measurement (by census or survey) was available. The rate of decline between periods is calculated assuming that there are five years between each observation of the level, when in fact the period may be either shorter or longer. Take an example. Say that the

70-75 observation was really from 1971, the 75-80 observation from 1978, and the 1980-85 observation from 1982. Then seven years elapsed between the first two observations and four between the second two.. It would be quite natural for cumulative progress over the second period to be less than over the first period, but as presented here, it would be reported as a decline in the rate of progress.

Immunization Rates. Immunization figures measure not a health outcome, but the frequency of an input to adequate health status. Immunization rates clearly provide information about the risk of catching communicable diseases. They may also convey something about the adequacy of primary health care available to the population, though not too much can be inferred from immunization as campaigns may be effected outside the day-to-day health system. Immunization coverage of children one year of age from WHO's Extended Immunization Program data base are used here.

Table IV.3: Immunization Trends 1980-1987

	BCG	DPT3	POLIO3	MEASLES
Argentina	+	+	NT	NT
Bolivia	NT	+	NT	+
Brazil	NT	NT	-	NT
Chile	NT	NT	NT	NT
Costa Rica	NT	NT	NT	NT
Dominican Rep.	+	-	NT	NT
El Salvador	NT	NT	+	NT
Jamaica	+	+	+	+
Venezuela	+	NT	-	NT

Source: WHO/EPI Information System and own calculations.
+ Positive Trend, significant at .05 level.
- Negative Trend, significant at .05 level.
NT No significant trend at .05 level.

Overall it seems that vaccination coverage is increasing. In order to determine whether there are trends in immunization coverage, as opposed to fluctuation around a steady state, linear time trend regressions were run for each of the four vaccines for each country. In twenty-two of the thirty-six cases, no trend was found. In eleven cases from six of the countries, immunization rates increased (with significance to the .05 level). In only three cases was a significant negative trend found. Jamaica's average coverage more than doubled for each of the vaccines.

Immunization rates are the most variable of the indicators examined here. There are cases of slippage from one year to the next which look alarming in isolation, and may indicate sporadic problems. Without looking at longer trends, misleading conclusions could be drawn. In Bolivia, immunization coverage fell from 31 percent of one year old children in 1980-2 to 15 percent in 1986. In Costa Rica, coverage of B.C.G. fell to 61 percent in 1986, after maintaining a level of 80-85 percent for the rest of the period. Coverage of D.P.T. fell from 43 percent to 21 percent in El Salvador and from 35 percent to 18 percent in the Dominican Republic. Complete polio coverage in Venezuela fell from 95 percent in 1980 to 59 percent in 1984.

Nutrition Indicators

Underweight. Malnutrition has decreased in all the countries for which we have information, except for Chile. It had achieved very low levels of malnutrition and even after a slight increase still has a lower level than almost all other countries in the group (see Table IV.4) Low weight for age and low birth weight are measures of malnutrition which can be very sensitive to changes which affect the child's nutrition. Based on standard growth curves, these are outcome measures which indicate what has actually happened to the child. Unfortunately, they are not available at regular intervals for most countries.

Table IV.4: Malnutrition

UNDERWEIGHT IN YOUNG CHILDREN

Country	Year	% Under-Weight	Classification	Source*
Brazil	1975	13.6	< -2 Std. Dev	NS
	1989	5.1	< -2 Std. Dev	NS
Bolivia	1985	23.0	< -2 Std. Dev.	HC
	1987	20.1	< -2 Std. Dev.	HC
Chile	1984	2.1	< -2 Std. Dev.	HC
	1986	2.4	< -2 Std. Dev.	HC
Costa Rica	1966	13.7	< -2 Std. Dev.	NS
	1982	5.3	< -2 Std. Dev.	NS
Jamaica	1978	15.0	WHO II & III	NS
	1985	14.6	WHO II & III	NS
	1989	9.2	WHO II & III	NS
Venezuela	1982	9.8	< 10th cent W/H	HC
	1986	7.4	< 10th cent W/H	HC

*NS--National Survey; HC--Health Center

PREVALENCE OF LOW BIRTH WEIGHT

Country	Year	% Under 2.5 kg.	Year	% Under 2.5 kg.
Chile	1984	6.5	1987	6.9
Costa Rica	1976	8.7	1985	6.7
El Salvador	1980	8.7	1986	8.6

Sources: UN ACC/SCN (1989); except for Brazil "National Health and Nutrition Survey, INAN/IBGE.; and Jamaica, STATIN and PIOJ (1989).

Education Indicators

Gross Enrollment Ratio. The gross enrollment ratio is the number of children in school divided by the number of children of school age in the population. The rate may be greater than 100 percent if there are children outside the appropriate age range enrolled. The primary gross enrollment rate may be over 100 percent if there are significant numbers of older children still in primary schools. Above the 100 level, it is unclear whether a decrease is good or bad. More children in school is good, but a decrease in a gross rate over 100 may indicate that children are receiving their primary education while they are still primary age, which is better than the delays, interruptions or repetition that leads to rates over 100. The data reported here are from UNESCO.

Between 1980 and 1985, the gross primary enrollment ratio was either above 100 or increased in eight of our nine countries. In El Salvador it

was constant. For the same period the secondary gross enrollment ratio increased markedly in Argentina and Chile, and increased mildly or was constant in Bolivia, Brazil, the Dominican Republic, El Salvador, and Venezuela. In Costa Rica it fell, significantly, from 47 to 41.

Net Enrollment Ratio. The net enrollment ratio is the number of school age children in school. Its interpretation is simple. An increase is good, a decrease is bad. The ratio is more difficult to calculate, as it requires detailed age-breakdowns from the school system. These are sometimes of dubious quality.

In four countries--Bolivia, Chile, Costa Rica and El Salvador, primary net enrollment fell between 1980 and 1985. In Bolivia and Chile the reduction was 2 and 1 percentage points, respectively. In Costa Rican and El Salvador the decline was more substantial--5 percentage points. This is serious deterioration in education which will affect the welfare of the individuals and the economies' growth potential.

Table IV.5: ENROLLMENT RATES

	Gross Primary		Gross Secondary		Net Primary	
	1980	1985	1980	1985	1980	1985
Argentina	106	108	57	70	95.1	95.2
Bolivia	84	89	36	37	86.6	84.3
Brazil	99	101	34	36	88.6*	90.1*
Chile	112	109	53	69	89.6	88.8
Costa Rica	106	101	47	41	89.3	83.9
Dominican Rep.	114	124	43	50	99.9*	107.3*
El Salvador	75	75	23	24	79.0*	73.8*
Jamaica	101	106	--	--	94.0	98.5
Venezuela	109	108	41	45	103.2*	105.6*

Source: UNESCO

*/ Primary school starts at 7 years old. Figure adjusted accordingly.

The decline in enrollment rate in Costa Rica and El Salvador is the most serious cause for concern in the social indicators. The decline in the rate of improvement in under-five mortality in the Dominican Republic and Venezuela is also reason for concern. The overall picture, though, is quite positive. Under-five mortality is decreasing in all countries. Malnutrition rates are dropping. Immunization rates are increasing. Secondary enrollments have increased in eight of the nine countries. In short, social progress continues. The next chapter considers these positive outcomes in light of the decline in resources in the social sectors in the 1980s.

Box IV.1: Improvements in Social Indicators

There is debate in the literature about the evolution of social indicators. UNICEF's State of the World's Children, 1989 and the UNICEF commissioned studies found in Adjustment with a Human Face, Vols. I & II, edited by Cornia, Jolly and Stewart (1987) present quite a negative view. In contrast, more recent and as yet unpublished papers by Kakwani, Makonnen and van der Gaag (1989), Behrman and Deolalikar (1989) present a much more positive picture of the behavior of social indicators.

UNICEF's State of the World's Children, 1989 is unequivocal. It claims "it can be estimated that at least half a million young children have died in the last twelve months as a result of the slowing down or the reversal of progress in the developing world: (p.1). In direct contrast to this last statement, Hill and Pebley (1989) assert that "...[t]here is no evidence at least on a regional basis and for countries with reliable data of a slowdown in the pace of decline in child mortality, except in the case of Asia, where mortality rates reached low enough levels to make continued large absolute declines in mortality difficult to achieve." Specifically in Latin American countries "...neither the absolute decline nor the percent decline [in under]five mortality rates] show any sign of deceleration from the early 1960s through the early 1980s" (pp. 15-16).

The explanation of the two opposing views of child mortality may lie in two technical points. First, the method used by the UNICEF study to estimate the number of children who may have died as a result of a slowing decline in under-five mortality rates is flawed. It is assumed in the UNICEF study that the rate of decline should be constant over time and independent of the level of mortality achieved, i.e. the under-five mortality rate is unbounded. In fact, it is bounded by zero. Thus the counter-factual scenario posited is unrealistic, and the number of children's deaths not avoided because of the economic crisis will be an inflated estimate. Second, UNICEF, because it needs a figure for every country, uses a variety of estimates, interpolations, and extrapolations, some from sources of questionable reliability. Hill and Pebley (1989), in contrast, use only estimates from household surveys which they judge to meet minimum standards of reliability.

Adjustment with a Human Face (AWAHF) makes the case that the welfare of children (and by implication, the poor and the society at large) has declined in the 1980s. The book presents in detail the instances in decline in either social inputs or outputs. It should be noted that the prominent placement of the social costs of adjustment in

Box IV.1 (cont.)

significant measure, due to the compelling case made in AWHF.

Having provoked examinations of the issues, AWHF's almost systematically gloomy view is now being partially rebutted. The rebuttals take two forms. One is the re-examination of specific facts, cases, or interpretations from AWHF. The second is a slight reformulation of question -- instead of "is there any evidence of deterioration?" the studies ask "how much evidence of deterioration exists?"

An example of the first is Behrman and Deolalikar's (1988) reexamination the case study on Jamaica done by Boyd for AWHF. Behrman and Deolalikar use a slightly more sophisticated analysis and show that adjustment, per se, is not the cause of declining social indicators. They also show that several of the case study's assertions of increasing malnutrition are stronger than the data support. The contrast between the two studies demonstrates the technical difficulties involved in assessing changes in social welfare and their causes. Conclusions drawn from the often weak data available are subject to debate.

The second kind of rebuttal to AWHF is exemplified in Hill and Pebley (see above) and Kakwani, et al. (1989) In the latter, a comprehensive series of social indicators was examined. For each variable in question, they include for comparison all developing countries for which there are data in the Bank's Social and Economic Data Base. Briefly, they find that in the 1980s, although per capita food production decreased, caloric and protein availability levels improved overall (although they decreased in one-third of the African nations and some nations in South Asia). Life expectancy increased slightly and progress in infant mortality rates was steady for the three five-year periods from 1972 to 1987. In education, both gross and net primary enrollment ratios increased for all country groups, except the "intensely adjusting" country group. The average ratios conceal the fact that net enrollment ratios dropped in 32 countries. Student teacher ratios also declined from 1975 to 1985.

Chapter V: Summary and Conclusions

Having explored separately the evidence of expenditure levels, the efficiency and equity of social spending, and indicators of social well-being, it is time to bring the elements together. A summary table recaps the trend in each of these concepts for each country. The apparent paradox which results is discussed, and conclusions drawn.

The Summary: Linking Inputs and Outcomes

The linkage of inputs and outcomes in health and education used here is extremely simple: it is the juxtaposition of indicators. The reasoning is post hoc ergo propter hoc, with possibly insufficient reaction time allowed.

In Table V.1 the bulk of the evidence reviewed in Chapters I-IV is summarized in short-hand form. A minus sign indicates a worsening of the situation, a positive sign an improvement, and a zero, stability. Thus for nutrition, a plus sign means that malnutrition rates have fallen. The symbols in parentheses indicate that the trend is very weak. The indicator may not be measured accurately so that the change in numbers does not really indicate a trend, or its trend may not be very important. In both health and education, a minus was assigned if the average real per capita expenditure from 1980-85 was below its 1980 level. The share in government was handled the same way.

In health, expenditures fell in eight of the nine countries, and the share of health in government fell in six of them. The share of preventive or community services relative to curative care fell in three countries and was constant in two. The nurse to doctor ratio fell in five countries, was stable in two and rose in one. Under five mortality fell in all countries. Malnutrition fell in five countries, was stable in one and rose slightly in one. Vaccination rates rose in four countries, were stable in four and fell in one.

In education, expenditures fell in six countries, and the share of education in government fell in four. The share of primary education rose in five countries, fell in two and was stable in one. In internal efficiency, about equal numbers of countries showed increases and decreases in the primary and secondary student teacher ratios and repetition rates. Enrollment rates rose in four countries, and showed mixed results in five.

In social security, expenditure levels rose in only one country and fell in the remaining six in spite of the fact that the share of social security in government rose in five countries.

Table V.1: Summary of Trends in Inputs and Outcomes

	Arg	Bol	Brz	Chl	CR	Dom	Slv	Jam	Ven
Health									
Expenditures		-	-	-	-	-	-	-	- +
Share in Govt	-	-	-	-	-	+	-	+	+
% Prev/Curative	-	-					(0)	(0)	-
Nurse/Doctor		-	-	(0)	-		(0)	-	+ -
U5MR-level	+	+	+	+	+	+	+	+	+
decline		+	+	+	+	(-)	-	+	(-) -
Nutrition		+	+	(-)	+		0	+	+
Vaccination		+	+	-	(0)	(0)	(0)	+	+(0)
Education									
Expenditures		-	-	+	(+)	-	(0)	-	- -
Share in Govt	-	+	+	(-)	-	+	-	(+)	+
% Primary/Total	-	(0)	+	+	-	+		-	
s/t primary		+	(-)		+	-	(-)	(-)	(-)
s/t secondary		+				-	+		-
repetition	+	-	(-)	+					-
Enrollment									
gross second.	+	(+)	(+)	+	-	+	(+)		+
gross primary	(+)	+	(+)	-	-	+	(0)	+	(-)
net primary	(+)	(0)	(+)	(-)	(+)	-	+	(-)	-
Social Security									
Expenditures			-	-	+	-	-		- -
Share in Govt		+	-	+	-	+		+	+

+ improving trend
- worsening trend
0 no change
() parentheses indicate weakness of trend

An Apparent Paradox. The most striking conclusion from the table is that the changes in expenditures are largely negative and the changes in outcomes are largely positive. There is no evidence that the efficiency or equity of spending increased enough to compensate for lower expenditures. Indeed, efficiency and equity seem to have declined slightly. Argentina and Bolivia provide perfect examples of the apparent paradox in health. Expenditures fell; the share of curative care increased; the imbalance in the employment of nurses and doctors grew; and yet all the outcome indicators improve. In other words, less money was spent apparently less well, and yet under-five mortality declined faster than before, vaccination coverage increased, and malnutrition decreased. In the other countries and in education the patterns are not quite so neat, but the paradox remains.

Explanations of the Paradox

The Production Function. Underlying the expectation that reduced social expenditures should lead to less favorable social indicators is the notion of the production function. Health outcomes, for example, can be thought of as the product of a health production function. Variables in the production function are publicly provided health services, the family's expenditures of time and money on health services and health-related practices, the family's housing, sanitation, nutrition, demographic characteristics, and disease risk factors, etc. A similar production function for education could be written. If all the other factors stay about the same, a reduction in public services (an input) should lead to worsening health or education status (the outcome). We find the opposite: that with fewer inputs of public services, health and education status continue to improve. Let us examine how the limitations of this study can explain that paradox.

Measurement Error. The accuracy of measurement of the social indicators is probably quite low, as has been alluded to in the chapter on social indicators (further discussion of this issue can be found in Appendix IX). Mortality rates are projected or interpolated on the basis of strong assumptions that are not sensitive to short term changes. Anthropometric surveys are done infrequently. Vaccination rates do not accurately reflect waste. Enrollment rates capture the moment of enrollment, but not whether a child attends school regularly. While judgments must be made, the strength of conclusion should be tempered by the strength of the data.

Perhaps more important are the limitations of using expenditures as a proxy for inputs. To the extent that the prices of the inputs declined, reductions in expenditures will not limit services. As illustrated in Box III.2, most of the change in education expenditures is linked to changes in teachers' salaries rather than to a change in the quantity of inputs. Furthermore, indicators of efficiency and equity that we have used are quite rough. As both the efficiency and equity chapters show, the aggregate proxy indicators are somewhat negative, but a wide variety of attempts have been made to make spending more effective. Most of them are of a scope or nature that would not be readily reflected in the proxy indicators used here. If the reforms are effective, it is possible for true efficiency and equity to be improving while the indicators used would not capture it. It could be, for example, that although there is no trend apparent in expenditures on materials in schools, that within a fixed (or even shrinking) budget, more money has been spent on text books or exercise books, and less money on school banners or sports equipment. Efficiency could thus be improved, but would not be reflected in the rough indicator used--expenditures for materials. Similarly, it could be that even though the percent of the overall budget spent on primary education is stable, that within that budget a larger share goes to rural or poor urban schools and less to the schools in wealthier areas. Equity would thereby be improved, but this would not be captured in our analysis.

Lags. A simple explanation is that changes in the social indicators can be expected to lag considerably behind changes in the inputs. Once physical infrastructure and health or education systems have been established, they can be expected to function to at least some degree, even with lower funding. Over time, the systems de-capitalize themselves. Some inputs into social progress are essentially irreversible. Once immunized, a child is no longer susceptible to the disease, nor able to communicate it to others. Once mothers have been taught to use oral rehydration salts, they can continue to do so even without the same level of continuous health education. Decreased efforts now could result in stagnation or deterioration of social indicators in the next five to twenty years.

Mother's Education. An especially important lagged effect may be partly due to past investment in education for female children.[15] The increase in women's education has a positive impact on their children's health status, use of health services, their school enrollment levels and education attainment (see Behrman [1989] for a review of these issues).

Other Government Expenditures. Health indicators are, clearly, influenced by other factors than simply health services. Health indicators can and probably have been affected by other activities of governments, with water and sanitation services having, perhaps, the strongest impact. In spite of the economic crisis of the 1980s, between 1980 and 1985, access to water and sewage facilities increased by 32 percent and 28 percent, respectively, in the entire Latin American region (Yepes, 1988). As the increase in access to both water and sewage services was greater than the population increase in the same time period, the region benefited from a net gain in water and sanitation. This increase could have had a positive impact on the health indicators in the region. It should be noted, however, that most of the gain in access to water occurred in Brazil and that the Dominican Republic, Bolivia, and Venezuela experiences a decline in the percent of the population with water service. In short, previous and continuing investments have probably played a large role in the improvement in health indicators in the region. The fact that present investments in water and sewage facilities are declining or not keeping pace with population growth may have a significant impact on health indicators in the future.

Household Contribution. The household's contribution in money or time to the production of social well-being may increase in order to substitute for the lesser availability of public services. Households may purchase textbooks previously supplied for free, use private health care instead of public health care, or spend more time commuting to or waiting in line for public services. The ability of the households to substitute for public

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15/ From 1960 to 1984, gross primary enrollment rates for girls increased from an average of 90 percent to 99 percent for the countries in the sample (less Jamaica) and gross secondary education enrollment rates rose from an average of 18 percent to 50 percent (Bustillo, [1989]).

services is assuredly limited. At the same time that they are faced with the need to do so, their budget constraints are being squeezed by lower wages and the need to produce in the home some services previously purchased outside the home.

Non-Governmental Organizations. Non-governmental organizations (NGOs) or charities may step in to fill some of the gap caused by lower public social expenditures. In Bolivia a canvass of major bilateral and multilateral agencies which work through NGOs revealed that, exclusive of contributions from PL-480, NGOs channeled US$19 million into the (quasi-public) health sector in 1988. In comparison, the Ministry of Health spent US$22 million. At least US$130 million was channeled into El Salvador through NGOs in 1987-88. Though concentrated in the social sector, all NGO activities are covered in this figure. By comparison, government expenditures in health and education were US$127 million in 1987. While neither study provides quantification of the trend over time, both report that NGOs have proliferated in number, size and scope of activities during the decade. They provide an alternative to government services of significant size that appears to have grown while government funding declined.

Technological Change. Vaccinations and oral rehydration are very inexpensive ways of saving children's lives. The child survival revolution that they have permitted gathered force in the 1970s and continued in the 1980s. Micro-nutrient fortification and supplementation programs can have similarly impressive impacts per dollar spent. As these programs spread, the dollar cost, or percent of the health budget remains low, but large improvements in child health can be obtained.

Conclusions

Clearly there are a number of explanations for the apparent paradox of decreasing expenditures, stagnant or decreasing efficiency and equity, and improving outcomes. It is impossible to say to what extent each is valid. It is, however, probably not necessary to reject the notion of the health (or education) production function.

What about the importance of social services in the production function? The results of this study may suggest that the importance of public social services not be overplayed. Deterioration in funding for public social services has not lead clearly and immediately to deterioration in social indicators. This does not suggest that fewer and less effective expenditures can be absorbed over the long run without impeding progress in health and education outcomes. The damage may already be caused but may not be noticeable for another few years. The ability of other factors to compensate for reduced public services may be larger than has been generally realized, but it is inherently limited. Better information will be needed to sort out these issues more precisely.

Because we have not rejected the notion that public social services are important, it is fitting to end with brief recommendations on how to address the issues discussed in the rest of the paper.

Improving the Measurement of Equity. The equity chapter revealed the paucity of information available on the equity of social service delivery. The Living Standard Measurement Studies (LSMS) surveys are an excellent tool[16] for improving the information base and, with small changes in staffing and/or priorities in work programs and supervision budgets, the Bank could aid in dramatically expanding their use.[17] As countries seek to revitalize their social services within tight budget constraints they are requesting aid in developing LSMS studies. Bank support for the development of this tool should be a high priority but is limited by resource constraints. More Bank staff time than readily available for loan supervision is required to establish the survey and catalyze the use of the information in policy and program management. There is also a growing shortage of staff knowledgeable about the survey and able to respond to burgeoning country demands. As yet, no mechanism is in place for the data generated to be used in the Bank's operational work.

Improving the Measurement of Efficiency. Public sector expenditure reviews should increase their use of administrative statistics to address efficiency questions. In countries where the administrative statistics are not regularly consolidated in a form that makes them immediately useful to Bank mission, their availability has been a limiting factor. PSER teams should therefore seek more involvement of sector ministry counterparts and/or pay local consultants to consolidate and analyze administrative statistics, just as is done with central ministries to obtain desired expenditure figures. In the longer run, the collection and use of efficiency measures in management should be fostered through the institutional development component of lending operations.

Improving the Measurement of Social Indicators. Much improvement in our knowledge of social indicators can be gained from the LSMS surveys and better use of administrative statistics discussed above. The surveys can certainly give high quality information on vaccination rates, malnutrition rates, enrollment rates, school attainment, use of social services, and poverty. The administrative statistics can add information on test scores, repetition rates, and service delivery.

Expenditure Levels. The policy agenda should include a growth oriented strategy, coupled with a high priority for the social sectors in the

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16/ The survey's usefulness is not limited to equity questions. The labor market information, for example, can be used to evaluate the efficiency of educational investment and to analyze macroeconomic policies.

17/ See LATHR memorandum on LSMS Activities in LAC Operations, dated December 4, 1989.

government budget. While there is some important variation between countries and years, this study shows that on average the social sectors' share of government spending suffered only small losses, that government's share in GDP was about constant, and that GDP fell markedly. The picture for the social sectors was most grim from 1984-86. After that, in several countries, losses in share of government were at least partly recouped. To a greater degree than generally recognized heretofore, the decline in funding for health and education has not been a result of choice or change in government priorities. It has been the result of falling GDP not accompanied by stronger re-orientation of government policies concerning the social sectors. Recovery of past funding levels in the social sectors will depend either upon the long process of GDP recovery, or upon bold decisions to favor the social sectors more highly.

Improving Equity and Efficiency. The study also shows that expenditures can be made in more effective ways--i.e. that their equity and efficiency can be increased markedly. The policy agenda should concentrate as much on increasing the efficiency and equity of expenditures as on increasing their amount. The usual gamut of tools is relevant -- priority for primary health and primary education, targeting, cost recovery with provision for exemptions for the poor and for preventive services, decentralization, institutional development, better management and monitoring systems, etc. Several innovative uses of these tools have been made in the region. Broader and more determined application of the stock tools should be encouraged, as well as further innovation.

Appendix I

Methodological Considerations for Chapter I

A large part of the information used here comes from the finished or draft public sector investment or expenditure reviews and their associated background materials. The country reports are less complete in coverage than standard sources, but their expenditure figures are more internally comparable. Complicated transfers and counter-transfers have been traced in some instances. (Re-)classifications of budget categories have been taken into account in some cases. Some consolidation for state and local expenditures has been done. Some of these problems remain, but the data are more comparable than those from the IMF Government Finance Statistics series, the frequently used alternate source.[18]

The basic data for the international and intertemporal comparisons to be performed in Chapter I were gleaned from a series of country studies, with many permutations of constant/current, base year if constant, and currency denomination combinations. In order to achieve the greatest comparability, and some measure of manageability, the following approach was taken.

To arrive at the magnitude of government expenditure in the social sectors in constant U.S. dollars, their share in GDP was multiplied by the 1980 U.S. dollar series of GDP provided by the World Bank Socio-Economic Data base. The data base collects from member countries their series of GDP statistics in constant local currency, rebases them to 1980, and uses the IEC conversion factor for 1980 (i.e. the exchange rate used for internal purposed by the World Bank and the International Monetary Fund, not necessarily the official exchange rate) to convert to U.S. dollars.

This calculation of social sector expenditures in constant U.S. dollars has the virtue of being consistent, of following Bank guidelines, and of using the best quality data available. It has the standard drawbacks of all inflation/exchange rate accommodations. In particular, it uses only the conversion factor for 1980, rather than a three year average as does the Atlas method, or a seventeen year average as does the Inter-American Development Bank's national accounts series. Because of this, the trend in GDP will look somewhat different to those familiar with the individual

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18/ One of the advantages of using data from the country studies rather than from the IMF GFS data can be illustrated here. IMF GFS data report a cumulative decrease in per capita health expenditures in Bolivia of 77.7% from 1980-1982. The background materials used in the preparation of the Bolivian case study used here shows that in 1980, employer contributions made to all government workers' social security accounts were classified as part of the Ministry of Health's budget. In 1981 and 1982, they were considered part of the Ministry of Finance's budget so that the Health budget would more accurately reflect the resources available for the public health system. Discounting the social security payments from the 1980 budget shows a cumulative decrease in the per capita health budget of 54.3% from 1980-82.

Appendix I

Methodological Considerations for Chapter I

country series from the Atlas method.

To calculate for each country the share in GDP for each sector, a series of public expenditures as a share of GDP was constructed. In some cases, the share was reported in the country studies, in some cases it was constructed by dividing the reported social sector expenditures by GDP figures from a standard source. In these cases, where possible, current local currency figures were used in the calculations.

In each country, the share of each sector in government expenditure was needed. In some cases it was reported in the country studies. In others it had to be calculated using the reported sectoral expenditures, and total government spending from a standard source. In the case of calculations, where possible, they were done in current local currency.

The share of total government expenditure in GDP was sometimes reported in the country studies. When it was not, it was calculated using as much information from the country studies as possible, the remainder from a standard source, and again, performed in current local currency.

For the sector share calculations, when the country reports did not provide sufficient information, current local currency figures for GDP and total government expenditures were taken from the World Bank's World Tables, 1989.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.1: ARGENTINA
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	3.5	3.3	2.7	3.4	3.7	3.6	3.4	NA	NA
Health	1.4	1.3	1.1	1.6	0.5	0.6	0.7	NA	NA
Social Security*	11.9	NA	NA	NA	NA	11.6	NA	NA	NA
Total	16.8	NA	NA	NA	NA	15.8	NA	NA	NA

Source: World Bank (1988aa) Annex 15 for education; health from World Bank (1987a), Annex 7-1, Table 1; Social Security from World Bank (1988aaa), pp. 1,5.

* Social Security includes both pensions and health benefits provided by social security institutes.

TABLE A.II.2: ARGENTINA
Social Sector Expenditures as a Percent of Government Expenditures*

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	16.0	15.0	13.0	14.0	16.0	15.0	14.0	NA	NA
Health	6.4	5.9	5.3	6.6	2.2	2.5	2.9	NA	NA
Social Security	54.3	NA	NA	NA	NA	48.3	NA	NA	NA
Total	76.7	NA	NA	NA	NA	65.8	NA	NA	NA

Source: Education from World Bank (1988aa), p. 19 and Annex 19, p.1; Health World Bank (1987a) and own calculations; Social Security from World Bank (1988aaa) pp. 1,5 and own calculations.

*Government expenditures are public sector consolidated expenditures.

TABLE A.II.3: ARGENTINA
Government Expenditures* as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Expend	21.9	22.0	20.8	24.3	23.1	24.0	24.3	NA	NA

Source: Calculated from World Bank (1988aa), Annex 15 and Table 2.7 p.19.

*Government expenditures are public sector consolidated expenditures.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.4: ARGENTINA
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	94.3	77.1	97.1	105.7	102.9	97.1	NA	NA
Health	100.0	92.9	78.6	114.3	35.7	42.9	50.0	NA	NA
Social Security	100.0	NA	NA	NA	NA	97.5	NA	NA	NA
Total	100.0	NA	NA	NA	NA	94.0	NA	NA	NA

Source: Calculated from above.

TABLE A.II.5: ARGENTINA
Index of Social Sector Expenditures as a Percent of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	93.8	81.3	87.5	100.0	93.8	87.5	NA	NA
Health	100.0	92.2	82.8	103.1	34.4	39.1	45.3	NA	NA
Social Security	100.0	NA	NA	NA	NA	89.0	NA	NA	NA
Total	100.0	NA	NA	NA	NA	85.8	NA	NA	NA

Source: Calculated from above.

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Appendix II

Social Sector Expenditures by Country

TABLE A.II.6: BOLIVIA
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education*	4.1	2.9	3.2	3.4	3.2	3.3	2.3	2.6	2.6
Health**	0.8	0.5	0.4	0.4	0.4	0.4	0.3	0.5	0.9
Social Security	2.8	2.7	2.0	1.9	3.5	1.9	1.7	NA	NA
Total	7.7	6.1	5.6	5.7	7.1	5.6	4.3	NA	NA

Source: World Bank (1989c) Table VII.1, p. 56. for Education and p. 40 for Health. Schulthess (1988a) Table II-1, p. 4.
*Education includes transfers to universities.
**MPSSP only

TABLE A.II.7: BOLIVIA
Social Sector Expenditures as a Percent of Government Expenditures*

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education**	21.3	19.7	26.6	27.7	25.0	19.9	17.5	18.5	22.9
Health***	4.1	3.4	3.3	3.4	3.1	2.4	2.3	2.8	7.9
Social Security	14.5	18.4	16.7	15.4	27.3	11.4	13.0	NA	NA
Total	39.9	41.5	46.6	46.5	55.4	33.7	32.8	NA	NA

Source: World Bank (1989c) Table VII.1, p. 56. for Education and p. 40 for Health. Schulthess (1988a) Table II-1, p. 4.
*Government Expenditures are Central Government only.
**Education includes transfers to universities.
***MPSSP only

TABLE A.II.8: BOLIVIA
Government Expenditures* as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Expend.	19.3	14.7	12.0	12.3	12.8	16.6	13.1	14.0	11.4

Source: World Bank (1989c) Table VII.1, p. 56 and own calculations.
*Government Expenditures are Central Government only.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.9: BOLIVIA
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	70.7	78.0	82.9	78.0	80.5	56.1	63.4	63.4
Health	100.0	62.5	50.0	50.0	50.0	50.0	37.5	62.5	112.5
Social Security	100.0	96.4	71.4	67.9	125.0	67.9	60.7	NA	NA
Total	100.0	79.2	72.7	74.0	92.2	72.7	55.8	NA	NA

Source: Calculated from above.

TABLE A.II.10: BOLIVIA
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	92.5	124.9	130.0	117.4	93.4	82.2	86.9	107.5
Health	100.0	82.9	80.5	82.9	75.6	58.5	56.1	68.3	192.7
Social Security	100.0	126.9	115.2	106.2	188.3	78.6	89.7	NA	NA
Total	100.0	104.0	116.8	116.5	138.8	84.5	82.2	NA	NA

Source: Calculated from above.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.11: BRAZIL
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	0.9	1.1	1.2	1.0	0.9	1.1	1.4	1.6	NA
Health	1.7	1.7	1.8	1.5	1.5	1.6	1.5	2.1	NA
Social Security	5.0	5.7	6.1	5.5	4.6	4.6	4.6	4.0	NA
Total	7.7	8.5	9.1	8.0	7.0	7.3	7.5	7.7	NA

Source: World Bank (1988c) Vol. II, Table 8a, p. 40. GDP from World Tables, 1989, p. 157 and own calculations

TABLE A.II.12: BRAZIL
Social Sector Expenditures as a Percent of Government Expenditures*

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	4.6	5.8	5.6	4.7	4.6	4.5	5.0	6.7	NA
Health	9.1	8.9	8.6	7.1	7.4	6.3	5.4	8.7	NA
Social Security	26.2	29.4	29.1	26.4	22.8	18.6	16.7	16.5	NA
Total	39.9	44.1	43.3	38.2	34.8	29.4	27.1	31.9	NA

Source: World Bank (1988c) Vol. II, Table 8a, p. 40. GDP from World Tables, 1989, p. 157 and own calculations
*Government Expenditures are Consolidated Federal Expenditures, (Treasury Resources).

TABLE A.II.13: BRAZIL
Government Expenditures* as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Exp	18.9	19.5	20.8	20.9	20.2	24.9	27.5	24.2	NA

Source: World Bank (1988c) Vol. II, Table 8a, p. 40. GDP from World Tables, 1989, p. 157 and own calculations
*Government Expenditures are Consolidated Federal Expenditures, (Treasury Resources).

Appendix II

Social Sector Expenditures by Country

TABLE A.II.14: BRAZIL
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	126.7	133.3	111.1	100.0	124.4	155.6	177.8	NA
Health	100.0	100.0	105.9	88.2	88.2	94.1	88.2	123.5	NA
Social Sec.	100.0	114.0	122.0	110.0	92.0	92.0	92.0	80.0	NA
Total	100.0	110.4	118.2	103.9	90.9	94.8	97.4	100.0	NA

Source: Calculated from above.

TABLE A.II.15: BRAZIL
Index of Social Sector Expenditures as a Percent of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	126.1	121.7	102.2	100.0	97.8	108.7	143.5	NA
Health	100.0	96.7	93.5	77.2	80.4	68.5	58.7	95.7	NA
Social Sec.	100.0	112.2	111.1	100.4	87.0	71.0	63.7	63.0	NA
Total	100.0	110.5	108.5	95.7	86.5	73.7	67.9	79.9	NA

Source: Calculated from above.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.16: CHILE
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	3.1	3.4	4.2	3.7	3.4	2.5	3.3	3.1	NA
Health	1.6	1.5	1.9	1.6	1.4	1.4	1.2	1.2	NA
Social Security	3.0	3.3	4.4	7.2	6.3	4.7	6.8	6.6	NA
Total	7.7	8.2	10.5	12.5	11.1	8.6	11.3	10.9	NA

Source: World Bank (1987b), Table 5.2, p. 87 and Table 9.7, p. 117 and own calculations.

TABLE A.II.17: CHILE
Social Sector Expenditures as a Percent of Government Expenditures*

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	8.2	9.1	9.6	8.4	7.5	5.4	7.5	NA	NA
Health	4.2	4.0	4.3	3.6	3.1	3.0	2.7	NA	NA
Social Security	8.0	8.8	10.1	16.3	13.9	10.2	15.4	NA	NA
Total	20.4	21.9	24.0	28.3	24.5	18.6	25.6	NA	NA

Source: World Bank (1987b), Table 5.2, p. 87 and Table 9.7, p. 117 and own calculations.
*Government expenditures are Consolidated Non-financial public sector.

TABLE A.II.18: CHILE
Government Expenditures* as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Exp	37.7	37.4	43.7	44.1	45.4	46.2	44.2	NA	NA

Source: World Bank (1987b), Table 5.1, p. 86.
*Government expenditures are Consolidated Non-financial public sector.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.19: CHILE
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	109.7	135.5	119.4	109.7	80.6	106.5	100.0	NA
Health	100.0	93.8	118.8	100.0	87.5	87.5	75.0	75.0	NA
Social Security	100.0	110.0	146.7	240.0	210.0	156.7	226.7	220.0	NA
Total	100.0	106.5	136.4	162.3	144.2	111.7	146.8	141.6	NA

Source: Calculated from above.

TABLE A.II.20: CHILE
Index of Social Sector Expenditures as a Percent of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	111.0	117.1	102.4	91.5	65.9	91.5	NA	NA
Health	100.0	95.2	102.4	85.7	73.8	71.4	64.3	NA	NA
Social Security	100.0	110.0	126.3	203.8	173.8	127.5	192.5	NA	NA
Total	100.0	107.4	117.6	138.7	120.1	91.2	125.5	NA	NA

Source: Calculated from above.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.21: COSTA RICA
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	6.7	5.8	4.8	5.0	5.0	5.0	5.1	5.0	4.8
Health *	10.5	7.3	5.9	6.4	6.0	6.0	6.1	5.8	5.9
Social Security	3.6	2.6	2.6	2.5	3.2	3.5	4.2	4.5	4.6
Total	20.8	15.7	13.3	13.9	14.2	14.5	15.4	15.3	15.3

Source: Riboud, (1990), Table II.4
* Includes nutrition

TABLE A.II.22: COSTA RICA
Social Sector Expenditures as a Percent of Government Expenditures

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	14.9	15.1	13.5	12.1	12.2	12.7	12.8	13.7	12.9
Health *	23.5	19.0	16.6	15.6	14.8	15.1	15.1	15.9	15.9
Social Security	8.0	6.7	7.2	6.2	8.0	8.9	10.5	12.3	12.3
Total	46.4	40.8	37.3	33.9	35.0	36.7	38.4	41.9	41.1

Source: Riboud, (1990), Table II.4 and own calculations.
* Includes nutrition

TABLE A.II.23: COSTA RICA
Government Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Exp	44.9	38.5	35.6	41.2	40.6	39.5	40.1	36.3	37.4

Source: Riboud, (1990), Table II.4

Appendix II

Social Sector Expenditures by Country

TABLE A.II.24: COSTA RICA
Index of Social Sector Expenditures as a Percent
of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	86.6	71.6	74.6	74.6	74.6	76.1	74.6	71.6
Health	100.0	69.5	56.2	61.0	57.1	57.1	58.1	55.2	56.2
Social Sec.	100.0	72.2	72.2	69.4	88.9	97.2	116.7	125.0	127.8
Total	100.0	75.5	63.9	62.5	68.3	69.7	74.0	73.6	73.6

Source: Calculated from above.

TABLE A.II.25: COSTA RICA
Index of Social Sector Expenditures as a Percent
of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	101.3	90.6	81.2	81.9	85.2	85.9	91.9	86.6
Health	100.0	80.9	70.6	66.4	63.0	64.3	64.3	67.7	67.7
Social Security	100.0	83.8	90.0	77.5	100.0	111.3	131.3	153.8	153.8
Total	100.0	87.9	80.4	73.1	75.4	79.1	82.8	90.3	88.6

Source: Calculated from above.

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Appendix II

Social Sector Expenditures by Country

TABLE A.II.26: DOMINICAN REPUBLIC
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	2.1	2.4	2.2	2.2	2.0	1.7	1.8	1.7	1.8
Health	1.1	1.2	1.1	1.1	1.0	0.9	1.0	1.1	1.5
Social Security	0.7	0.7	0.7	0.7	0.6	0.5	0.6	0.7	0.5
Total	3.9	4.3	4.0	4.0	3.6	3.1	3.4	3.5	3.8

Source: Rodriguez-Grossi (1989), Table 6.

TABLE A.II.27: DOMINICAN REPUBLIC
Social Sector Expenditures as a Percent of Government Expenditures*

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	12.8	14.7	16.4	14.8	15.6	12.8	12.4	9.8	10.0
Health	6.8	7.6	8.2	7.6	8.1	6.9	6.7	6.3	8.1
Social Sec.	4.4	4.4	4.9	4.7	4.7	3.5	3.9	3.8	2.7
Total	24.0	26.7	29.5	27.1	28.4	23.2	23.0	19.9	20.8

Source: Rodriguez-Grossi (1989), Table 6.
*Government Expenditures are Total Central Government Expenditures.

TABLE A.II.28: DOMINICAN REPUBLIC
Government Expenditures* as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Exp	16.1	16.2	13.6	14.9	12.6	13.2	14.5	17.1	18.4

Source: Rodriguez-Grossi (1989), Table 6. panel A columns 8/9.
*Government Expenditures are Total Central Government Expenditures.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.29: DOMINICAN REPUBLIC
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	114.3	104.8	104.8	95.2	81.0	85.7	81.0	85.7
Health	100.0	109.1	100.0	100.0	90.9	81.8	90.9	100.0	136.4
Social Security	100.0	100.0	100.0	100.0	85.7	71.4	85.7	100.0	71.4
Total	100.0	110.3	102.6	102.6	92.3	79.5	87.2	89.7	97.4

Source: Calculated from above.

TABLE A.II.30: DOMINICAN REPUBLIC
Index of Social Sector Expenditures as a Percent of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	114.8	128.1	115.6	121.9	100.0	96.9	76.6	78.1
Health	100.0	111.8	120.6	111.9	119.1	101.5	98.5	92.6	119.1
Social Sec.	100.0	100.0	111.4	106.8	106.8	79.5	88.6	86.4	61.4
TOTAL	100.0	111.3	122.9	113.0	118.3	96.7	95.8	82.9	86.7

Source: Calculated from above.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.31: EL SALVADOR
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987
Education	3.9	4.0	3.9	3.2	3.2	2.9	2.5	2.3
Health	1.8	1.7	1.6	1.5	1.5	1.2	1.1	0.9
Social Security	NA	NA	NA	1.6	1.9	1.5	1.3	2.2
Total	NA	NA	NA	6.3	6.6	5.6	4.9	5.4

Source: World Bank (1989g), Table 2.8, p.111 and Table 1.1 of Appendix, p. 93: Castaneda (1989a) Tables 4 and 12.
*Only includes Trabajo Prevision Social, foreign contributions not included.

TABLE A.II.32: EL SALVADOR
Social Sector Expenditures as a Percent of Government Expenditures*

	1980	1981	1982	1983	1984	1985	1986	1987
Education	23.1	19.3	19.5	18.2	13.8	18.0	13.8	16.4
Health	10.6	8.5	8.1	8.7	6.7	7.2	5.8	6.6
Social Security	NA	NA	NA	9.2	11.8	8.2	9.4	NA
TOTAL	NA	NA	NA	36.1	32.3	33.4	29.0	NA

Source: World Bank (1989g), Table 2.8, p.111.
* Government Expenditures are Central Government expenditures.

TABLE A.II.33: EL SALVADOR
Government Expenditures* as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987
Gov't Exp	16.9	20.4	19.4	17.4	16.1	18.2	13.8	NA

Source: World Bank (1989g), Table 2.8, p.111 and Table 1.1, p.93
* Government Expenditures are Central Government expenditures.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.34: EL SALVADOR
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987
Education	100.0	102.6	100.0	82.1	82.1	74.4	64.1	59.0
Health	100.0	94.4	88.9	83.3	83.3	66.7	61.1	50.0
Social Security	NA	NA	NA	NA	NA	NA	NA	NA
Total	NA	NA	NA	NA	NA	NA	NA	NA

Source: Calculated from above.

TABLE A.II.35: EL SALVADOR
Index of Social Sector Expenditures as a Percent of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987
Education	100.0	83.5	87.7	78.8	59.7	77.9	59.7	71.0
Health	100.0	80.2	76.4	82.1	63.2	67.9	54.7	62.3
Social Security	NA	NA	NA	NA	NA	NA	NA	NA
Total	NA	NA	NA	NA	NA	NA	NA	NA

Source: Calculated from above.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.36: JAMAICA
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	6.8	6.9	6.8	6.2	5.3	4.8	5.0	6.0	NA
Health	3.3	3.4	3.6	3.2	2.6	2.5	2.2	3.0	NA
Social Security	0.5	0.5	0.5	0.5	0.4	0.5	NA	NA	NA
Total	10.6	10.8	10.9	9.9	8.3	7.8	NA	NA	NA

Source: World Bank (1988e) Table 2, p. 3 and Tables A.1 and A.2 in Appendix.

TABLE A.II.37: JAMAICA
Social Sector Expenditures as a Percent of Government Expenditures

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	13.7	14.2	14.7	14.6	14.1	12.5	13.3	NA	NA
Health	6.7	7.1	7.6	7.0	6.8	6.9	6.5	NA	NA
Social Security	0.9	1.0	1.0	1.0	1.1	1.2	NA	NA	NA
TOTAL	21.3	22.3	23.3	22.6	22.0	20.6	NA	NA	NA

Source: PIOJ, 1986, Table 20.1B; and Ministry of Finance, Financial Statements and Revenue Estimates for 1985/1986.

TABLE A.II.38: JAMAICA
Government Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Exp	50.3	48.5	47.2	48.7	37.4	37.7	42.1	NA	NA

Source: PIOJ (1986), Table 6.2, p. 64.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.39: JAMAICA
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	101.5	100.0	91.2	77.9	70.6	73.5	88.2	NA
Health	100.0	103.0	109.1	97.0	78.8	75.8	66.7	90.9	NA
Social Security	100.0	100.0	100.0	100.0	80.0	100.0	NA	NA	NA
Total	100.0	101.9	102.8	93.4	78.3	73.6	NA	NA	NA

Source: Calculated from above.

TABLE A.II.40: JAMAICA
Index of Social Sector Expenditures as a Percent of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	103.6	107.3	106.6	102.9	91.2	97.1	NA	NA
Health	100.0	106.0	113.4	104.5	101.5	103.0	97.0	NA	NA
Social Security	100.0	111.1	111.1	111.1	122.2	133.3	NA	NA	NA
Total	100.0	104.7	109.4	106.1	103.3	96.7	NA	NA	NA

Source: Calculated from above.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.41: VENEZUELA
Social Sector Expenditures as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	5.0	5.5	5.2	5.5	5.2	5.9	NA	NA	NA
Health	1.7	1.9	2.0	2.8	2.4	2.6	NA	NA	NA
Social Security	2.1	1.9	2.5	2.3	2.2	2.2	NA	NA	NA
Total	8.8	9.3	9.7	10.6	9.8	10.7	NA	NA	NA

Source: Riboud (1989), Table A-2 for 1980-85, G. Marquez (1990), Tables A-10 and A-15, and Unified Survey for 1986-88.

TABLE A.II.42: VENEZUELA
Social Sector Expenditures as a Percent of Government Expenditures*

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	16.7	15.9	15.4	18.8	19.5	21.0	NA	NA	NA
Health	5.6	5.5	6.0	9.4	8.8	9.3	NA	NA	NA
Social Security	6.9	5.7	7.4	7.7	8.1	7.8	NA	NA	NA
Total	29.2	27.1	28.8	35.9	36.4	38.1	NA	NA	NA

Source: Riboud (1989), Table A-2 for 1980-85, Marquez (1989), Unified Survey for 1986-88, and own calculations.
*Government Expenditures are Consolidated public expenditures.

TABLE A.II.43: VENEZUELA
Government Expenditures* as a Percent of Gross Domestic Product

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gov't Exp	30.2	34.5	33.6	29.6	27.0	28.1	NA	NA	NA

Source: World Tables 1988-89 and Unified Survey.
*Government Expenditures are Consolidated public expenditures.

Appendix II

Social Sector Expenditures by Country

TABLE A.II.44: VENEZUELA
Index of Social Sector Expenditures as a Percent of Gross Domestic Product, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	110.0	104.0	110.0	104.0	118.0	NA	NA	NA
Health	100.0	111.8	117.6	164.7	141.2	152.9	NA	NA	NA
Social Security	100.0	90.5	119.0	109.5	104.8	104.8	NA	NA	NA
Total	100.0	105.7	110.2	120.5	111.4	121.6	NA	NA	NA

Source: Calculated from above.

TABLE A.II.45: VENEZUELA
Index of Social Sector Expenditures as a Percent of Government Expenditures, 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Education	100.0	95.2	92.2	112.6	116.8	125.7	NA	NA	NA
Health	100.0	98.2	107.1	167.9	157.1	166.1	NA	NA	NA
Social Security	100.0	82.6	107.2	111.6	117.4	113.0	NA	NA	NA
Total	100.0	92.8	98.6	122.9	124.7	130.5	NA	NA	NA

Source: Calculated from above.

Appendix III

Indices of Social Sector Expenditures

Table A.III.1: Index of Per Capita Gross Domestic Product 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-5	80-*
Argentina	100.00	91.69	85.38	86.62	87.53	82.51	86.10	86.39	85.77	89.0	88.0
Bolivia	100.00	98.04	91.31	83.06	80.30	77.75	73.29	72.98	72.69	88.4	83.3
Brazil	100.00	94.69	93.59	88.93	91.93	97.49	103.10	103.97	101.55	94.4	97.2
Chile	100.00	103.81	87.55	85.51	89.42	90.07	93.52	97.21	102.59	92.7	94.4
Costa Rica	100.00	95.50	86.81	87.20	91.88	90.67	92.64	93.15	94.18	92.0	92.4
Dom. Rep.	100.00	101.50	100.82	102.93	98.61	95.17	93.80	98.52	96.73	99.8	98.7
El Salvador	100.00	90.88	84.88	84.73	85.94	86.40	85.14	83.86	83.45	88.8	87.3
Jamaica	100.00	101.12	100.43	101.34	98.78	92.61	93.25	96.93	98.68	99.0	98.1
Venezuela	100.00	96.71	91.99	86.09	82.81	81.61	84.87	85.14	86.41	89.9	88.4
Average	100.00	97.1	91.4	89.6	89.7	88.3	89.5	90.9	91.3	92.7	92.0
Average**	100.00	98.8	93.2	90.7	90.5	89.3	90.6	92.6	93.3	93.7	93.2

Source: Bank Economic and Social Data Base: IEC data base.
*Most recent year that data are available.
**This average does not include Argentina and El Salvador.

Table A.III.2: Index of Government Expenditures as a Percent of Gross Domestic Product 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	100.0	100.5	95.0	110.0	105.5	109.6	110.0	NA	NA	103.4	104.4
Bolivia	100.0	76.2	62.2	63.7	66.3	86.0	67.9	72.5	59.1	75.7	72.7
Brazil	100.0	103.2	110.1	110.6	106.9	131.7	145.5	128.0	NA	110.4	117.0
Chile	100.0	99.2	115.9	117.0	120.4	122.5	117.2	NA	NA	112.5	113.2
Costa Rica	100.0	85.7	79.3	91.8	90.4	88.0	89.3	80.8	83.3	89.2	87.6
Dominican Rep.	100.0	100.6	84.5	92.5	78.3	82.0	90.1	106.2	114.3	89.6	94.3
El Salvador	100.0	120.7	114.8	103.0	95.3	107.7	81.7	NA	NA	106.9	103.3
Jamaica	100.0	96.4	93.8	96.8	74.4	75.0	83.7	NA	NA	89.4	88.6
Venezuela	100.0	114.2	111.3	98.0	89.4	93.0	NA	NA	NA7	101.0	101.0
Average	100.0	99.6	96.3	98.2	91.9	99.5	NA	NA	NA	97.6	97.6
Average**	100.0	96.5	93.9	95.8	89.4	96.9	NA	NA	NA	95.4	95.4

Source: Appendix II.
*Most recent year that data are available.
**This average does not include Argentina and El Salvador.

Appendix III

Indices of Social Sector Expenditures

Table A.III.3: Index of Total Social Sector Expenditures as a Percent of Government Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	100.0	NA	NA	NA	NA	85.8	NA	NA	NA	NA	NA
Bolivia	100.0	104.0	116.8	116.5	138.8	84.5	82.2	NA	NA	110.1	106.1
Brazil	100.0	110.5	108.5	95.7	86.5	73.7	67.9	79.9	NA	95.8	90.3
Chile	100.0	107.4	117.6	138.7	120.1	91.2	125.5	NA	NA	112.5	114.4
Costa Rica	100.0	87.9	80.4	73.1	75.4	79.1	82.8	90.3	88.6	82.7	84.2
Dominican Rep.	100.0	111.3	122.9	113.0	118.3	96.7	95.8	82.9	86.7	110.4	103.1
El Salvador	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jamaica	100.0	104.7	109.4	106.1	103.3	96.7	NA	NA	NA	103.4	103.4
Venezuela	100.0	92.8	98.6	122.9	124.7	130.5	NA	NA	NA	111.6	111.6
Average**	100.0	102.6	107.8	109.4	109.6	93.2	NA	NA	NA	103.8	103.8

Source: Appendix II.
*Most recent year that data are available.
** Does not include Argentina and El Salvador.

Table A.III.4: Index of Per Capita Total Social Sector Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	100.0	NA	NA	NA	NA	72.7	NA	NA	NA	NA	NA
Bolivia	100.0	77.7	66.4	61.5	74.0	56.5	40.9	NA	NA	72.7	68.2
Brazil	100.0	104.5	110.6	92.4	83.6	92.4	100.4	103.9	NA	98.4	98.5
Chile	100.0	110.5	119.4	138.8	128.9	100.6	137.2	137.6	NA	116.4	121.6
Costa Rica	100.0	72.1	55.6	58.3	62.8	63.3	68.6	68.6	69.3	68.7	68.7
Dominican Rep.	100.0	111.9	103.4	105.6	91.0	75.6	81.8	88.4	94.2	97.9	94.7
El Salvador	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jamaica	100.0	103.0	103.3	94.6	77.3	68.1	NA	NA	NA	91.1	91.1
Venezuela	100.0	102.2	101.4	103.7	92.2	99.2	NA	NA	NA	99.8	99.8
Average**	100.0	97.4	94.3	93.6	87.1	79.4	NA	NA	NA	92.0	92.0

Source: Appendix II.
*Most recent year that data are available.
** Does not include Argentina and El Salvador.

Appendix III

Indices of Social Sector Expenditures

Table A.III.5: Index of Health Expenditures as a Percent of Government Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	100.0	92.2	82.8	103.1	34.4	39.1	45.3	NA	NA	75.3	71.0
Bolivia	100.0	82.9	80.5	82.9	75.6	58.5	56.1	68.3	192.7	80.1	88.6
Brazil	100.0	96.7	93.5	77.2	80.4	68.5	58.7	95.7	NA	86.1	83.8
Chile	100.0	95.2	102.4	85.7	73.8	71.4	64.3	NA	NA	88.1	84.7
Costa Rica	100.0	80.8	70.6	66.4	63.0	64.3	64.3	67.7	67.7	74.2	71.6
Dominican Rep.	100.0	111.8	120.6	111.9	119.1	101.5	98.5	92.6	119.1	110.8	108.3
El Salvador	100.0	80.2	76.4	82.1	63.2	67.9	54.7	62.3	NA	78.3	73.3
Jamaica	100.0	106.0	113.4	104.5	101.5	103.0	97.0	NA	NA	104.7	103.6
Venezuela	100.0	98.2	107.1	167.9	157.1	166.1	NA	NA	NA	132.7	132.7
Average	100.0	93.8	94.1	98.0	85.4	82.3	NA	NA	NA	92.3	92.3

Source: Appendix II.
*Most recent year that data are available.

Table A.III.6: Index of Per Capita Health Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	100.0	85.1	67.1	99.0	31.3	35.4	43.1	NA	NA	69.7	65.8
Bolivia	100.0	61.3	45.7	41.5	40.1	38.9	27.5	45.6	81.8	54.6	53.6
Brazil	100.0	94.7	99.1	78.5	81.1	91.7	91.0	128.4	NA	90.9	95.6
Chile	100.0	97.3	104.0	85.5	78.2	78.8	70.1	72.9	NA	90.6	87.7
Costa Rica	100.0	66.5	48.9	53.2	52.6	51.9	53.9	51.5	53.0	62.2	59.1
Dominican Rep.	100.0	110.7	100.8	102.9	89.6	77.9	85.3	98.5	131.9	97.0	99.7
El Salvador	100.0	85.8	75.5	70.6	71.6	57.6	52.0	41.9	NA	76.9	69.4
Jamaica	100.0	104.2	109.6	98.3	77.8	70.2	62.2	88.1	NA	93.3	88.8
Venezuela	100.0	108.1	108.2	141.8	116.9	124.8	NA	NA	NA	116.6	116.6
Average	100.0	90.4	84.3	85.7	71.0	69.7	NA	NA	NA	83.5	83.5

Source: Appendix II.
*Most recent year that data are available.

Appendix III

Indices of Social Sector Expenditures

Table A.III.7: Index of Education Expenditures as a Percent of Government Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	100.0	93.8	81.3	87.5	100.0	93.8	87.5	NA	NA	92.7	92.0
Bolivia	100.0	92.5	124.9	130.0	117.4	93.4	82.2	86.9	107.5	109.7	103.9
Brazil	100.0	126.1	121.7	102.2	100.0	97.8	108.7	143.5	NA	108.0	112.5
Chile	100.0	111.0	117.1	102.4	91.5	65.9	91.5	NA	NA	98.0	97.0
Costa Rica	100.0	101.3	90.6	81.2	81.9	85.2	85.9	91.9	86.6	90.0	89.4
Dominica Rep.	100.0	114.8	128.1	115.6	121.9	100.0	96.9	76.6	78.1	113.4	103.6
El Salvador	100.0	83.5	84.4	78.8	59.7	77.9	59.7	71.0	NA	80.7	76.9
Jamaica	100.0	103.6	107.3	106.6	102.9	91.2	97.1	NA	NA	101.9	101.3
Venezuela	100.0	95.2	92.2	112.6	116.8	125.7	NA	NA	NA	107.1	107.1
Average	100.0	102.4	103.3	101.9	99.1	92.3	NA	NA	NA	100.2	100.2

Source: Appendix II.
*Most recent year that data are available.

Table A.III.8: Index of Per Capita Education Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	100.0	86.5	65.9	84.1	92.5	84.9	83.7	NA	NA	85.7	85.4
Bolivia	100.0	69.3	71.3	68.9	62.7	62.6	41.1	46.3	46.1	72.5	63.1
Brazil	100.0	115.7	124.8	98.8	91.9	119.1	160.4	184.8	NA	108.4	124.4
Chile	100.0	113.9	118.6	102.1	98.1	72.6	99.5	97.2	NA	100.9	100.3
Costa Rica	100.0	82.7	62.3	65.1	68.5	67.7	70.4	69.6	67.5	74.4	72.6
Dominican Rep.	100.0	116.0	105.6	107.8	93.9	77.0	80.4	79.8	82.9	100.1	93.7
El Salvador	100.0	93.2	84.9	69.5	70.5	64.2	54.6	49.5	NA	80.4	73.3
Jamaica	100.0	102.6	100.4	92.4	77.0	65.4	68.6	85.5	NA	89.6	86.5
Venezuela	100.0	106.4	95.7	94.7	86.1	96.3	NA	NA	NA	96.5	96.5
Average	100.0	98.5	92.2	87.0	82.4	78.9	NA	NA	NA	89.8	89.8

Source: Appendix II.
*Most recent year that data are available.

Appendix III

Indices of Social Sector Expenditures

Table A.III.9: Index of Social Security Expenditures as a Percent of Government Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	80-85	80-*
Argentina	100.0	NA	NA	NA	NA	89.0	NA	NA	NA	NA	NA
Bolivia	100.0	126.9	115.2	106.2	188.3	78.6	89.7	NA	NA	119.2	115.0
Brazil	100.0	112.2	111.1	100.4	87.0	71.0	63.7	63.0	NA	97.0	88.6
Chile	100.0	110.0	126.3	203.8	173.8	127.5	192.5	NA	NA	140.2	147.7
Costa Rica	100.0	83.8	90.0	77.5	100.0	111.3	131.3	153.8	153.8	93.8	111.3
Domin. Rep.	100.0	100.0	111.4	106.8	106.8	79.5	88.6	86.4	61.4	100.8	93.4
El Salvador	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jamaica	100.0	111.1	111.1	111.1	122.2	133.3	NA	NA	NA	114.8	114.8
Venezuela	100.0	82.6	107.2	111.6	117.4	113.0	NA	NA	NA	105.3	105.3
Average**	100.0	103.8	110.3	116.8	127.9	102.0	NA	NA	NA	110.1	110.1

Source: Appendix II.
*Most recent year that data are available.
** Does not include Argentina and El Salvador.

Table A.III.10: Index of Per Capita Social Security Expenditures 1980 = 100

	1980	1981	1982	1983	1984	1985	1986	1987	1988	80-85	80-*
Argentina	100.0	NA	NA	NA	NA	80.4	NA	NA	NA	NA	NA
Bolivia	100.0	94.5	65.2	56.4	100.4	52.8	44.5	NA	NA	78.2	73.4
Brazil	100.0	107.9	114.2	97.8	84.6	89.7	94.8	83.2	NA	99.0	96.5
Chile	100.0	114.2	128.4	205.2	187.8	141.1	212.0	213.9	NA	146.1	162.8
Costa Rica	100.0	69.1	62.7	60.6	81.9	88.1	108.1	116.3	120.4	77.1	89.7
Domin. Rep.	100.0	101.5	100.8	102.9	84.5	68.0	80.4	98.5	69.1	93.0	89.5
El Salvador	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jamaica	100.0	101.1	100.4	101.3	79.0	92.6	NA	NA	NA	95.8	95.8
Venezuela	100.0	87.5	109.5	94.3	86.7	85.5	NA	NA	NA	93.9	93.9
Average**	100.0	96.5	97.3	102.7	100.7	88.3	NA	NA	NA	97.6	97.6

Source: Appendix II.
*Most recent year that data are available.
**Does not include Argentina and El Salvador.

Appendix IV

Per Capita Expenditures in the Social Sectors

Table A.IV.1: Per Capita Expenditures in Health (in constant 1980 US dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Argentina	28.2	24.0	18.9	27.9	8.8	10.0	12.1	NA	NA
Bolivia	4.4	2.7	2.0	1.8	1.8	1.7	1.2	2.0	3.6
Brazil	33.6	31.8	33.3	26.3	27.2	30.8	30.5	43.1	NA
Chile	39.6	38.5	41.2	35.8	31.0	31.2	27.8	28.9	NA
Costa Rica	228.4	152.0	111.6	121.4	120.2	118.5	123.1	117.6	121.0
Dominican Rep.	11.9	13.2	12.0	12.3	10.7	9.3	10.2	11.7	15.7
El Salvador	14.2	12.2	10.7	10.0	10.2	8.2	7.4	5.9	NA
Jamaica	40.5	42.2	44.4	39.8	31.5	28.4	25.2	35.7	NA
Venezuela	78.5	84.8	85.0	111.3	91.8	98.0	NA	NA	NA

Source: Appendix II, Bank Economic and Social Data Base; Social Indicators and IEC data base.

Table A.IV.2: Per Capita Expenditures in Education (in constant 1980 US dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Argentina	70.4	60.9	46.4	59.2	65.1	59.7	58.9	NA	NA
Bolivia	22.6	15.7	16.1	15.6	14.2	14.2	9.3	10.5	10.4
Brazil	17.8	20.6	22.2	17.6	16.3	21.2	28.5	32.8	NA
Chile	76.7	87.3	91.0	78.3	75.2	55.7	76.3	74.6	NA
Costa Rica	146.0	120.7	91.0	95.0	100.0	98.8	102.8	101.5	98.5
Dominican Rep.	22.8	26.4	24.0	24.5	21.4	17.5	18.3	18.2	18.9
El Salvador	30.7	28.7	26.1	21.4	21.7	19.7	16.8	15.2	NA
Jamaica	83.4	85.6	83.8	77.1	64.2	54.6	57.2	71.4	NA
Venezuela	230.9	245.6	220.9	218.7	198.8	222.4	NA	NA	NA

Source: Appendix II, Bank Economic and Social Data Base, Social Indicators and IEC Data Base.

Appendix IV

Per Capita Expenditures in the Social Sectors

Table A.IV.3 Per capita Expenditures in Social Security (in constant 1980 US dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Argentina	239.3	NA	NA	NA	NA	192.4	NA	NA	NA
Bolivia	15.4	14.6	10.1	8.7	15.5	8.1	6.9	NA	NA
Brasil	98.8	106.6	112.7	96.6	83.5	88.6	93.7	82.1	NA
Chile	74.2	84.7	95.3	152.3	139.4	104.7	157.3	158.7	NA
Costa Rica	78.4	54.2	49.1	47.5	64.2	69.1	84.7	91.2	94.4
Dom. Rep.	7.6	7.7	7.6	7.8	6.4	5.2	6.1	7.5	5.2
El Salv.	NA	NA	NA	10.7	12.9	10.2	8.7	14.5	NA
Jamaica	6.1	6.2	6.2	6.2	4.8	5.7	NA	NA	NA
Venezuela	97.0	84.8	106.2	91.4	84.1	82.9	NA	NA	NA

Source: Appendix II, Bank Economic and Social Data Base, Social Indicators and IEC Data Base.

Table A.IV.4: Per Capita Expenditures in Social Sectors (in constant 1980 US dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Argentina	337.8	NA	NA	NA	NA	245.5	NA	NA	NA
Bolivia	42.5	33.0	28.2	26.1	31.4	24.0	17.4	NA	NA
Brasil	152.1	159.0	168.2	140.5	127.1	140.5	152.7	158.1	NA
Chile	190.5	210.6	227.4	264.4	245.6	191.6	261.4	262.1	NA
Costa Rica	452.7	326.4	251.7	263.9	284.4	286.4	310.6	310.4	313.9
Dom. Rep.	42.3	47.3	43.7	44.6	38.5	32.0	34.6	37.4	39.8
El Salvador	NA	NA	NA	42.1	44.7	38.1	32.9	35.7	NA
Jamaica	130.1	134.0	134.3	123.1	100.6	88.6	NA	NA	NA
Venezuela	406.4	415.3	412.1	421.4	374.7	403.3	NA	NA	NA

Source: Appendix II, Bank Economic and Social Data Base, Social Indicators and IEC Data Base.

Appendix IV

Per Capita Expenditures in the Social Sectors

Table IV.5: Per Capita Gross Domestic Product
(in constant 1980 US dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1980-85	80-*
Argentina	2011	1844	1717	1742	1760	1659	1732	1737	1725	1789	1770
Bolivia	552	541	504	458	443	429	404	403	401	488	459
Brazil	1975	1870	1848	1756	1816	1925	2036	2053	2006	1865	1921
Chile	2474	2568	2166	2115	2212	2228	2313	2405	2538	2294	2336
Costa Ric	2178	2080	1891	1899	2002	1975	2018	2029	2052	2004	2014
Dom. Rep.	1084	1100	1093	1116	1069	1031	1017	1068	1048	1082	1069
El Salvad	788	716	669	668	677	681	671	661	658	700	688
Jamaica	1227	1241	1232	1244	1212	1136	1144	1189	1211	1215	1204
Venezuela	4618	4466	4248	3975	3824	3769	3919	3932	3990	4150	4082

Source: Bank Economic and Social Data Base; Social Indicators and National Accounts Data Bases.
*Most recent year that data are available.

Appendix V

Social Sector Expenditures as Percent of Government Expenditures

TABLE A.V.1: Health Expenditures as a Percent of Government Expenditures

	1980	1981	1982	1983	1984	1985	1986	1987	1988	80-85	80-*
Argentina	6.4	5.9	5.3	6.6	2.2	2.5	2.9	NA	NA	4.8	4.5
Bolivia	4.1	3.4	3.3	3.4	3.1	2.4	2.3	2.8	7.9	3.3	3.6
Brazil	9.1	8.9	8.6	7.1	7.4	6.3	5.4	8.7	NA	7.9	7.7
Chile	4.2	4.0	4.3	3.6	3.1	3.0	2.7	NA	NA	3.7	3.6
Costa Ric	23.5	19.0	16.6	15.6	14.8	15.1	15.1	15.9	15.9	17.4	16.8
Dom. Rep.	6.8	7.6	8.2	7.6	8.1	6.9	6.7	6.3	8.1	7.5	7.4
El Salvad	10.6	8.5	8.1	8.7	6.7	7.2	5.8	6.6	NA	8.3	7.8
Jamaica	6.7	7.1	7.6	7.0	6.8	6.9	6.5	NA	NA	7.0	6.9
Venezuela	5.6	5.5	6.0	9.4	8.8	9.3	4.9	5.0	4.6	7.4	7.4
Average	8.6	7.8	7.6	7.7	6.8	6.6	NA	NA	NA	7.5	7.3

Source: Appendix II.
*Most recent year that data are available.

TABLE A.V.2: Education Expenditures as a Percent of Government Expenditures

	1980	1981	1982	1983	1984	1985	1986	1987	1988	80-85	80-*
Argentina	16.0	15.0	13.0	14.0	16.0	15.0	14.0	NA	NA	14.8	14.7
Bolivia	21.3	19.7	26.6	27.7	25.0	19.9	17.5	18.5	22.9	23.4	22.1
Brazil	4.6	5.8	5.6	4.7	4.6	4.5	5.0	6.7	NA	5.2	5.0
Chile	8.2	9.1	9.6	8.4	7.5	5.4	7.5	NA	NA	8.0	8.0
Costa Ric	14.9	15.1	13.5	12.1	12.2	12.7	12.8	13.7	12.9	13.4	13.3
Dom. Rep.	12.8	14.7	16.4	14.8	15.6	12.8	12.4	9.8	10.0	14.5	13.3
El Salvad	23.1	19.3	19.5	18.2	13.8	18.0	13.8	16.4	NA	18.7	17.8
Jamaica	13.7	14.2	14.7	14.6	14.1	12.5	13.3	NA	NA	14.0	13.9
Venezuela	16.7	15.9	15.4	18.8	19.5	21.0	11.4	13.3	11.6	17.9	17.9
Average	14.6	14.3	14.9	14.8	14.3	13.5	NA	NA	NA	14.4	14.0

Source: Appendix II.
*Most recent year that data are available.

Appendix V

Social Sector Expenditures as Percent of Government Expenditures

TABLE A.V.3: Social Security Expenditures as a Percent of Government Expenditures

	1980	1981	1982	1983	1984	1985	1986	1987	1988	80-85	80-*
Argentina	54.3	NA	NA	NA	NA	48.3	NA	NA	NA	NA	NA
Bolivia	14.5	18.4	16.7	15.4	27.3	11.4	13.0	NA	NA	17.3	16.7
Brazil	26.2	29.4	29.1	26.4	22.8	18.6	16.7	16.5	NA	25.4	23.2
Chile	8.0	8.8	10.1	16.3	13.9	10.2	15.4	NA	NA	11.2	11.8
Cos. Rica	8.0	6.7	7.2	6.2	8.0	8.9	10.5	12.3	12.3	7.5	8.9
Dom. Rep.	4.4	4.4	4.9	4.7	4.7	3.5	3.9	3.8	2.7	4.4	4.1
El Salv.	NA	NA	NA	9.2	11.8	8.2	9.4	NA	NA	NA	NA
Jamaica	0.9	1.0	1.0	1.0	1.1	1.2	NA	NA	NA	1.0	1.0
Venezuela	6.9	5.7	7.4	7.7	8.1	7.8	NA	NA	NA	7.3	7.3
Average**	9.8	10.6	10.9	11.1	12.3	8.8	NA	NA	NA	10.6	10.4

Source: Appendix II
*Most recent year that data are available.
**Does not include El Salvador and Argentina.

TABLE A.V.4: Social Sector Expenditures as a Percent of Government Expenditures

	1980	1981	1982	1983	1984	1985	1986	1987	1988	80-85	80-*
Argentina	76.7	NA	NA	NA	NA	65.8	NA	NA	NA	NA	NA
Bolivia	39.9	41.5	46.6	46.5	55.4	33.7	32.8	NA	NA	43.9	42.3
Brazil	39.9	44.1	43.3	38.2	34.8	29.4	27.1	31.9	NA	38.3	36.1
Chile	20.4	21.9	24.0	28.3	24.5	18.6	25.6	NA	NA	23.0	23.3
Costa Ric	46.4	40.8	37.3	33.9	35.0	36.7	38.4	41.9	41.1	38.4	39.1
Dom. Rep.	24.0	26.7	29.5	27.1	28.4	23.2	23.0	19.9	20.8	26.5	24.7
El Salvad	NA	NA	NA	36.1	32.3	33.4	29.0	NA	NA	NA	NA
Jamaica	21.3	22.3	23.3	22.6	22.0	20.6	NA	NA	NA	22.0	22.0
Venezuela	29.2	27.1	28.8	35.9	36.4	38.1	NA	NA	NA	32.6	32.6
Average**	31.6	32.1	33.3	33.2	33.8	28.6	NA	NA	NA	32.1	31.4

Source: Appendix II.
*Most recent year that data are available.
**Does not include Argentina and El Salvador.

Appendix VI

Data on Equity

Table A.VI.1: Incidence of Total Education Expenditures (in percent)

Country	Year	Bottom 40% of Population	Top 20% Of Population
Argentina	1980	48	17
Bolivia			
Brazil	1986	31	18
Chile	1980	48	18
Costa Rica	1980	42	20
Costa Rica	1982	42	20
Costa Rica	1986	36	24
Dominican Rep.	1980	24	33
Dominican Rep.	1989	50	13
El Salvador			
Jamaica			
Venezuela			

Sources: 1980 data for Argentina, Chile, Costa Rica and the Dominican Republic from McMahon (1989), p. 33; Brazil data from World Bank (1988c), p. 19; Dominican Republic data from Rodriguez-Grossi (1989), Table 18; Costa Rica data for 1982 from Sauma Fiatt (1982), Table 24 and for 1986 from Riboud (1990), p. 18.

Table A.IV.2: Incidence of Education Expenditure for Primary Education (in percent)

Country	Year	Bottom 40% of Population	Top 20% Of Population
Argentina*	1980	57.0	11.0
Bolivia			
Brazil	1980	15.0	5.0
Chile	1985	59.0	9.0
Costa Rica	1986	57.0	8.0
Dominican Rep.	1980	31.5	20.6
Dominican Rep.	1989	59.0	4.0
El Salvador			
Jamaica			
Venezuela	ND	44.8	16.0

Sources: Argentina data from World Bank (1988a), p.101; Costa Rica data from Riboud, (1990), p. 18. Chile data from World Bank (1987b), p. 22; Dominican Republic data from Rodriguez-Grossi (1989), p. 11 for 1980 and Table 18 for 1989; Venezuela data from Riboud, (1989),p. 51.

*Primary and Secondary

Appendix VI

Data on Equity

Table A.VI.3: Incidence of Education Expenditures for Higher Education (in percent)

Country	Year	Bottom 40% of Population	Top 20% Of Population
Argentina	1980	17	38
Bolivia			
Brazil	1986	na	48
Chile	1980	12	54
Chile	1985	17	52
Costa Rica	1980	17	42
Costa Rica	1982	17	42
Costa Rica	1986	15	43
Dominican Rep.	1980	2	76
Dominican Rep.	1989	32	33
El Salvador			
Jamaica			
Venezuela	ND	0	92
Venezuela	ND	23	34

Sources: 1980 data for Argentina, Chile, Costa Rica and the Dominican Republic from McMahon (1989), p. 33; data for Chile from World Bank (1987b), p. 22; Costa Rica data from Sauma Fiatt (1982) Table 21 for 1982 and from Riboud (1990), p. 18 for 1986; Dominican Republic data from Rodrigues-Grossi (1989), p. 11 for 1980 and Table 18 for 1989; Venezuela data from Riboud (1989), p. 51.

Table A.VI.4 : Incidence of Health Expenditures (in percent)

Country	Year	Bottom 40% of Population	Top 20% Of Population
Argentina	1980	68.6	4.3
Bolivia			
Brazil	1986	30.0	39.0
Chile	1985	63.7	5.2
Costa Rica	1986	51.2	10.8
Dominican Rep.	1980	71.0	11.8
Dominican Rep.	1984	57.4	9.0
Dominican Rep.	1989	57.3	6.7
El Salvador			
Jamaica			
Venezuela			

Sources: Data for Argentina from World Bank (1988a), p. 101; Brazil data from World Bank (1988c), p. 19; Costa Rica data from Riboud (1990), p. 23; Chile data from World Bank (1987b), p. 22; Dominican Republic data from Rodrigues-Grossi (1989), p. 11 for 1980 and p. 25 for 1984 and 1989.

Appendix VI

Data on Equity

Table A.VI.5: Incidence of Social Security: Pensions (in percent)

Country	Year	Bottom 40% of Population	Top 20% Of Population
Argentina	1980	23	34
Bolivia			
Brazil			
Chile	1983	19	42
Chile	1985	13	32
Costa Rica	1983	19	32
Costa Rica	1986	16	48
Dominican Rep.	1980	21	9
Dominican Rep.	1989	21	36
El Salvador			
Jamaica			
Venezuela			

Source: Chile data for 1985 from World Bank (1987b) p. 22; Costa Rica data for 1986 from Riboud (1990) p. 27; all other data from Rodriguez-Grossi (1989), p. 29.

Table A.VI.6: Share of Social Sectors 1980 and 1985 (in percent)

	Argentina	Bolivia	Brazil	Chile	Costa Rica	Dominican Republic	Jamaica	Venezuela	Average
					1980				
Education	20.8	53.2	11.7	40.3	32.2	53.8	64.2	56.8	41.6
Health	8.3	10.4	22.1	20.8	50.5	28.2	31.1	19.3	23.8
Soc. Sec.	70.8	36.4	64.9	39.0	17.3	17.9	4.7	23.9	34.4
					1985				
Education	22.8	58.9	15.1	29.1	34.5	54.8	61.5	55.1	41.5
Health	3.8	7.1	21.9	16.3	41.4	29.0	32.1	24.3	22.0
Soc. Sec.	73.4	33.9	63.0	54.7	24.1	16.1	6.4	20.6	36.5

Source: Annexes II and IV.

Appendix VII

Data on Efficiency

Table A.VII.1: Share of Primary Education in Education Expenditures

	1980	1986
Argentina	46.2	10.1**
Bolivia	64.0*	64.0**
Brasil	18.4	49.0
Chile	45.7	51.1
Costa Rica	33.0	37.0
Dominican Rep.	43.4	53.6***
Jamaica	38.0	35.0***
Venezuela	28.3	43.5

Sources: Data for Argentina from World Bank (1988a) p. 78; for Bolivia, from World Bank (1989c) p. 58; for Brasil, from World Bank (1988c) Vol. II, p. 111 for 1980 and p. 96 for 1985; for Chile, data from Castaneda (1989b), p.60; Costa Rica from Riboud (1990), p. 46; Dominican Republic data from Rodriguez-Grossi (1989), p. 10; data for Jamaica from World Bank (1989i),Annex II, Table 3 and; Venezuela data from G. Marques (1990), Table A-10.

* 1981.
** 1985.
***1987.

Appendix VII

Data on Efficiency

Table A.VII.2: Share of Higher Education in Education Expenditures

	1980	1986
Argentina	15.70	25.10**
Bolivia	10.00*	18.00**
Brazil	42.00	32.00
Chile	33.60	23.80
Costa Rica	33.70	40.30
Dominican Rep.	22.20	19.90***
Jamaica	19.00	24.00
Venezuela	NA	35.50***

Sources: Data for Argentina from World Bank (1988a) p. 78; for Bolivia, from World Bank (1989c) p. 58; for Brazil, from World Bank (1988c) Vol. II, p. 111 for 1980 and p. 96 for 1985; for Chile, data from Castaneda (1989b), p.60; Costa Rica from Riboud (1990), p. 46; Dominican Republic data from Rodriguez-Grossi (1989), p. 10; data for Jamaica from World Bank (1989i),Annex II, Table 3 and; Venezuela data from G. Marquez (1990), Table A-10.

* 1981.
** 1985.
***1987.

Appendix VII

Data on Efficiency

Table A.VII.3: Results of SSC Examinations 1980-85, Jamaica

	1980	1981	1982	1983	1984	1985
Business						
Ranges 1-3	2313	3150	4171	4452	3799	4873
Ranges 4-5	414	1151	756	800	860	746
Percentage	15	27	18	15	18	13
Industrial						
Ranges 1-3	3381	3851	3844	4143	4405	4260
Ranges 4-5	309	266	284	516	413	290
Percentage	8	6	7	11	9	6
Math						
Ranges 1-3	11550	11224	12363	12712	11820	10788
Ranges 4-5	50	70	73	442	136	142
Percentage	0.4	0.6	0.6	3	1	1
English						
Ranges 1-3	10888	11286	11691	12517	11789	11288
Ranges 4-5	311	510	689	533	509	279
Percentage	3	4	6	4	4	2
Science						
Ranges 1-3	2878	2619	2608	2735	3175	3177
Ranges 4-5	120	70	224	506	127	111
Percentage	4	3	8	16	4	3

Source: Hallak (1988), Annex 1, p.7.

Table A.VII.4: Test Scores in Chile, 1984, 1988

	MATH		SPANISH	
	Municipality	Priv. Subsid.	Municipality	Priv. Subsid.
1984	53.4	58.3	59.6	64.8
1988	50.6	55.8	53.0	59.7

Source: Hoenack 1989, p.26-27.

Appendix VIII

Lessons from the Literature

The case studies used for this study were commissioned due to concern that the Latin American economic crisis, through the resultant fiscal strain, had decreased public social expenditures to the point that the coverage and quality of services were reduced, and that ultimately, social well-being had declined. This chapter outlines the literature which generated this concern. This report, and therefore this literature review, focusses on the public provision of social services and social indicators. The (perhaps larger) effects of the economic crisis and adjustment programs on wages and employment, and the possible consequent effects on social indicators is left to other works. Kanbur and Mazumdar's ongoing project treats labor market effects, and Behrman (1989) reviews the interaction between human resources and poverty.

Macroeconomic Context

Statements of the grim economic picture for developing countries, highly indebted countries, and Sub-Saharan African countries, are plentiful (see, for example, World Bank (1986), ODC (1989), Sahn (1989), the introductory section of many of the case studies used as inputs here, or their macroeconomic companion pieces). Indeed, the arguments are so familiar to the audience of this report that they will not be reviewed here, lest the readers' patience be exhausted.

Effects on Expenditures in the Social Sectors

Is aggregate spending on social sectors declining? Is the share of the social sectors in government falling? When government spending falls, what happens to the social sectors? This section summarizes the evidence on these questions from four major studies using data from the International Monetary Fund's (IMF) Government Finance Statistics (GFS), and one which uses country studies more like those used for this report.

In brief, Kakwani, Makonnen and van der Gaag (1989) show that per capita expenditures in health and education have been constant on average for broad country groupings. Pinstrup-Andersen, Jaramillo, and Stewart (1987) highlight those cases in which per capita health and education expenditures have, indeed, fallen. Musgrove (1980) shows declining per capita health expenditures in five LAC countries. Hicks (1989) and Hicks and Kubisch (1983) show that in countries where real consolidated central government expenditures fall, social sectors suffer less than average cutbacks.

Is aggregate social spending declining? The most global view is presented in Kakwani, Makonnen, and van der Gaag (1989). They use the IMF GFS series to compile figures on government expenditures on education,

health, other welfare, [19] and defense in aggregate and as a share of total central government expenditures, and on government expenditures as a share of GDP. They present the data for 1975, 1980 and 1986 for thirty-four countries (all of the eighty-eight developing countries considered in their paper for which data were available). They divide their sample into intensely adjusting countries, those which received three or more World Bank Structural Adjustment or Sector Adjustment loans and started before 1985; those that received fewer loans but started before 1985; those that received adjustment loans after 1985; and those countries which have received no adjustment loans from the World Bank.

In absolute levels, government expenditures on health and education are stable in all country groupings except for the strongly adjusting countries. Other welfare expenditures increase for all groups except those adjusting before 1985. For strongly adjusting countries education spending per capita falls by about 11 percent from 1980 to 1986, and per capita health spending falls by about 19 percent during the period. Other social welfare expenditures, however, increase by about 16 percent. Thus social spending has, over the grand averages, been fairly constant.

Using IMF GFS data, Pinstrup-Andersen, Jaramillo, and Stewart (1987) report that from 1979-83 in nineteen of fifty-one countries[20], real per capita expenditures on education fell. In twenty-two of fifty countries, real per capita expenditures on health fell. In Latin America, real per capita education expenditures declined in 10 of seventeen countries, and real per capita health expenditures declined in eight of sixteen countries. World Health Organization (WHO) data show that real per capita health expenditures have declined in fourteen of twenty-three Latin American countries.

Pinstrup-Andersen, Jaramillo and Stewart (1987) do not calculate average changes in per capita social expenditures, rather they contrast percent changes in per capita GDP and health and education expenditures for twenty-three countries with the most severe cuts. In eighteen of these countries health expenditures fell more, frequently substantially more,

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19/ Other social welfare includes social security and welfare affairs and services, housing and community affairs and services, and recreational, cultural and religious affairs and services.

20/ The selection criteria for these countries is not reported.

than per capita GDP. In eight of these countries education expenditures fell more than per capita GDP.[21]

Musgrove (1989) reports on the impact of the economic crisis on health in five LAC countries (Mexico, Honduras, Ecuador, Brazil, and Uruguay) using in-depth case study data. He finds that per capita expenditures on health fell in the 1980s for all five countries, to about the same extent that GDP per capita fell.

Is the share of social sectors in government falling? Kakwani, Makonnen and van der Gaag (1989) find that government expenditure as a share of GDP increased in each of the sub-groups of countries used. In intensely adjusting countries, the share of total public spending on education and health in total government expenditure increased slightly from 1975 to 1980 and decreased in 1986. For countries adjusting before 1985, the share of expenditure on education and on health decreased from 1975 to 1980 and increased in 1986. For countries adjusting after 1985, the share of health and education declined slightly in the 1980s, but the share of other welfare increased. In non-adjusting countries, the share of health and education increase in the 1980s. Strong patterns of decreasing priority of social sectors as measured by share of total government expenditures were not evident.

What happens to the social sectors when government spending falls? Hicks and Kubisch (1983) examine the degree of protection of social sectors[22] relative to that of other sectors. The study used all cases in the period 1972-80 in which real consolidated central government expenditures fell--37 observations from 32 countries. On average total

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21/ One of the drawbacks of IMF GFS data is illustrated here. Their table reports an annual decrease in per capita health expenditures in Bolivia of 77.7% from 1980-1982. The background materials used in the preparation of the Bolivian case study used here shows that in 1980, employer contributions made to all government worker's social security accounts were classified as part of the Ministry of Health's budget. In 1981 and 1982, they were considered part of the Ministry of Finance's budget so that the Health budget would more accurately reflect the resources available for the public health system. Discounting the social security payments from the 1980 budget shows a cumulative decrease in the per capita health budget of 54.3% during that period. This is still significant, but rather a different order of severity than the 78% annual decrease reported in Pinstrup-Anderson and Jaramillo. Even if the table is mislabled, as it appears to be, and the decrease is 78% cumulative, the difference between the IMF GFS and the adjusted figure is important.

22/ The social sectors are defined as health, education, social security and welfare, housing and community amenities, and other community and social services.

government expenditures fell by 13 percent, social sector expenditures by 5 percent, administrative and defense expenditures by 8 percent, productive sector expenditures by 15 percent, infrastructure sector expenditures by 22 percent, and miscellaneous expenditures by 7 percent. Thus the social sectors were the most protected when real expenditures are cut.

Hicks (1989) updated the 1983 study using the same method, but data from the period 1978-84, and eliminated from the sample cases for which real declines in consolidated central government expenditures were smaller than 5 percent. This left 28 observations in 24 countries. He found that while total expenditures fell by 17.2 percent, social sector expenditures fell by 11.4 percent, defense expenditures by 6.5 percent, general public services expenditures by 9.2; productive sector expenditures by 18.7 percent, infrastructure expenditures by 25.4 percent, and other expenditures (including interest) by 1.4 percent. For this sample, social sector expenditures were still more protected than the average, but not the most protected sector.

Pinstrup-Andersen, Jaramillo and Stewart (1987) defined a highly protected sector as one is which real expenditures increase during a government budget reduction. A protected sector was one in which expenditures were cut by a smaller percentage than the aggregate. A vulnerable sector was one in which expenditures are cut more than the aggregate percentage reduction. They then classified each sector for each country according to this definition and present the percentage frequency of the classification by region. They show that for 65 percent of the twenty countries in their Latin American sample, education was vulnerable, i.e. suffered greater cutbacks than total government for the individual country. Health was vulnerable in a quarter of cases, protected in a third, and highly protected in the remaining 40 percent.

Musgrove concluded that for his five countries:

> "there definitely was a crisis of resources for health at the central government level and that, in the typical case, the precrisis expenditure per capita had still not been regained in 1986. However, one cannot conclude from this that the health sector suffered discrimination on account of the crisis. It neither systematically suffered a reduction of its relative share of the reduced total product nor was it revealed as not having priority for national governments."(p. 35)

Effects on Social Progress

The mostly widely read statements on the welfare effects of adjustment and the depression of the 1980s are probably UNICEF's State of the World's Children, 1989 and the UNICEF commissioned studies Adjustment with a Human Face, Volumes I & II, edited by Cornia, Jolly and Stewart (1987). These present quite a negative view. In contrast, more recent and

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Lessons from the Literature

as yet unpublished papers by Kakwani, Makonnen and van der Gaag (1989), Behrman and Deolalikar (1989), and Hill and Pebley (1989) present a much more positive picture of the behavior of social indicators. This section will review the differences in the conclusions, methods and data of these studies.

The Gloomy View. UNICEF's State of the World's Children, 1989 is unequivocal. The opening sentence declares "For almost nine hundred million people, approximately one sixth of mankind, the march of human progress has now become retreat." The first page states "it can be estimated that at least half a million young children have died in the last twelve months as a result of the slowing down or the reversal of progress in the developing world."

The procedure they use to estimate the half a million child deaths is explained by them as follows:

> "This estimate does not include child deaths in countries affected by war or civil strife (such as Angola, Chad, Ethiopia, or Mozambique). It is based on an analysis of under-five deaths in those countries where the rate of reduction in under-five mortality has been less in the period 1980-87 than in the period 1970-80. Furthermore, it excludes all countries in which the rate of decline in under-five mortality was, in any case, slowing down (as evidenced by a lower rate of decline in 1970-80 than in 1960-70). This leaves only 16 countries (10 in Africa and 6 in Latin America) in which there has been a definite slowing down, running counter to recent national trends, in the rate of decline in under-five morality. For these 16 countries alone, the number of child deaths in the last twelve months is approximately 650,000 more than would have been the case if the 1970-80 rate of decline in under-five mortality had continued, but not accelerated, in the period 1980-87. The majority of these deaths (approximately 400,000 in Africa and the remainder in Latin America) could therefore be said to be related to the slowing down or reversal of the development process during the 1980s which is a result of unprecedented borrowing, rising interest rates, falling commodity prices, inadequate investment of borrowed funds, and the domestic and international management of the resulting debt crisis." (p.1).

The method used to estimate the number of children who may have died as a result of a slowing decline in under-five mortality rates is theoretically flawed. It assumes that the rate of decline should be constant, i.e. that the rate of decline in under-five mortality rates over time is constant, and independent of the level of mortality achieved. In this formulation, the under-five mortality rate is unbounded. In fact, the under-five mortality rate is bounded by zero. No fewer than zero children of a thousand live births can die. Thus the counter-factual scenario posited is unrealistic, and the number of children's deaths not avoided because of the economic crisis and depression will be an inflated estimate, although the extent of overestimation is uncertain.

Appendix VIII

Lessons from the Literature

Adjustment with a Human Face (AWAHF) is comprised of two volumes. The first is a broad treatment of issues. It describes the economic trends and their effects on child welfare in the 1980s and outlines an alternative approach, the "adjustment with a human face" of the title. The second volume is a compendium of ten case studies tracing macroeconomic developments, government spending, and to the extent possible, indicators of social well-being.

Volume I made a forceful case that the welfare of children (and by implication, the poor and the society at large) is declined in 1980s. The compilation of fragmented bits of evidence is impressive, both for the effort it required, and for the strength of impression it conveys. The book presents in detail the instances in decline in either input or output indicators that it gleans from many sources. It thereby sounds the alarm that improvements in social welfare cannot be taken for granted, that slippage is possible, and that the issue of safeguarding social sectors cannot be ignored.

The Gloomy View Rebutted. The prominent placement of the social costs of adjustment in the policy and research agenda of the last couple of years is in significant measure due to the compelling case made by AWAHF. Having provoked more balanced examinations of the issues, the almost systematically gloomy view of AWAHF is now being partly rebutted. The rebuttals take two forms. The first is technical differences in the selection and use of data. The second is in a slight reformulation of question - instead of "is there any evidence of deterioration" the studies ask "how much evidence of deterioration exists?"

Technical Differences. Jamaica is the only case study for which the materials used in this report provide sufficiently parallel and detailed material to compare with the UNICEF case studies. Limited portions of the two studies are therefore presented here in detail. The evaluation demonstrates the technical difficulties in assessing changes in social welfare and their causes. The judgment of the analyst plays an important role in the conclusions drawn.

Boyd's (1986) Jamaican case study commissioned by AWAHF (Vol II, Chapter 5) emphasized declining social expenditures during the 1980s. Behrman and Deolalikar (1988) extended the years covered to the 1970s and computed quadratic time trends for dozens of variables. Macroeconomic indicators, employment, wages, agricultural income, government transfers, food expenditures and inputs and outputs of social services delivery were covered. On the whole, they did not find the dummy variables assigned to the years of structural adjustment to be significant. They show that deterioration in these indicators is not due mainly to adjustment, and that some of the declines cited in Boyd are statistically insignificant.

Boyd asserted that malnutrition increased in Jamaica in the 1980s. Behrman and Deolikar reviewed the evidence used by Boyd and concluded that

no assertion of increasing malnutrition was warranted. Two series of data are used. The first is an increase in the percent of children malnourished according to all three categories of the Gomez scale of weight for age. The data are from children attending health centers. The percent malnourished increased from 25.8 percent in 1983 to 27.1 percent in 1985. There are three difficulties with concluding from this that malnutrition increased. First, such clinic based data are notoriously difficult to interpret because children who attend clinics may be systematically different for children in general.[23] The bias if of unknown size, direction and constancy. Second, the quarterly variations are large compared to the change cited. Third, first degree Gomez measures[24] may include a large portion of children who are not malnourished, but just at the small end of the normal variation found in human size.

The second set of data upon which Boyd based his assertion of increased malnutrition is from the cause of admission to the national pediatric hospital. The percentage of hospital admissions with malnutrition increased from 2.1 percent in 1983 to 2.4 percent in 1984 to 3.7 percent in 1985 and that with malnutrition and gastroenteritis increased from 2.0 percent to 2.7 percent to 4.7 percent in these three years. Behrman and Deolalikar point out five problems with using the data to draw a firm conclusion. Most importantly, the citation by Boyd omitted from the original source a third category, admissions for malnutrition and/or gastroenteritis. This category fell from 23.5 percent to 19.0 percent from 1983 to 1984 so that the apparent increase in the first two categories may be due to changes in categorization rather than cause. To a lesser degree the same may be true for 1985. The other objections relate to the difficulty of interpreting data of unknown bias and large variation. It is interesting to note that neither study refers to malnutrition rates, as measured by most of the usual definitions, from two high quality households nutrition surveys in 1978 and 1985. They show that by WHO standards for weight for age,[25] 15.0 percent of children were undernourished in 1978, and 14.6 percent in 1985.

Behrman and Deolalikar (1989) concluded "Careful consideration of one of the UNICEF case studies and comparison with our work on the same case leads to considerable doubt about the firmness of the UNICEF foundation for emphasizing the need for adjustment with a human face." (p. 37)

23/ If the children who go to clinics are sicker or weaker than the average, then they are more likely to be malnourished. If medical coverage is not universal, then it is most likely the poorest children, who are also most likely to be malnourished, who would not get health care.

24/ From 75 to 90 % of the mean reference weight for age.

25/ The moderate (60-80 percent of standard) and severe (less than 60 percent of standard) categories have been combined here.

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Lessons from the Literature

The Question Reformulated. Kakwani, Makonnen, and van der Gaag (1989) examined a comprehensive series of social indicators to determine how extensive deterioration has been. They relied mostly on the Bank Economic and Social Data base for data and included for each comparison all developing countries for which there were data for the variable in question. Their numerous, largely positive, results are greatly condensed in the following paragraph.

Life expectancy: Longevity increased in the 1980s, with a slightly better performance than in the 1970s. Female life expectancy, especially, increased, surpassing that of men in Asia. Infant mortality: Progress is steady in the three five year periods from 1972 to 1987, with progress apparently increasing over time. Per capita food production: Per capita food production has declined in most of the developing countries between 1981 and 1987. Undernutrition: Undernutrition as measured by aggregate caloric adequacy indices, showed that in about one-third of African countries, the degree of under-nutrition has worsened from 1980-86. Although large scale undernutrition exists in many countries, particularly those in South Asia, there is a general trend towards improvement in their nutritional situation. Protein intake: An overall improvement in protein consumption in 86 developing countries between 1980 and 1986, rising from 57 to 61 grams per person per day. School enrollment: Gross primary enrollment ratios increased for all country groups monotonically for five year points from 1970 to 1985, except for the intensely adjusting countries. Although in 1980 they had achieved the highest rate of 94.2 percent, they fall in 1985 to 90.1 percent. Net primary enrollment statistics followed the same trend. The average ratios conceal the fact that net enrollment ratios dropped in 32 countries. Student/teacher ratio: The rate of growth of both students and teachers dropped from 1975-80 to 1980-85. The student rate dropped more, indicating lower student/teacher ratios.

Hill and Pebley (1989) focussed on the issue of under-five mortality. By deleting from standard sources all projections and those estimates not of minimum quality, they produced a higher quality data series for a smaller number of countries than UNICEF or the BESD.[26] Using this base, they concluded:

> "For Latin American countries, neither the absolute decline nor the percent decline [in under-five mortality rates] show any sign of deceleration or acceleration from the early 1960s through the early 1980s. In Asia, the absolute decline does slow down over time, although the percent decline remains roughly constant. The difference between the percent decline and the absolute decline

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26/ See Murray (1987) for a detailed, factual and scathing review of the series for life expectancy and under-five mortality published in the standard U.N., World Bank and U.S. Bureau of the Census sources.

reflects a movement by a number of Asian countries to low mortality levels during this period. In sub-Saharan African countries, both the absolute and the percentage declines appear to have accelerated considerably over the time period. Thus there is no evidence at least on a regional basis and for countries with reliable data of a slowdown in the pace of decline in child mortality, except in the case of Asia, where mortality rates reached low enough levels to make continued large absolute declines in mortality difficult to achieve." (pp. 15-16).

The first lesson from the literature about the state of social progress is mixed. UNICEF and AWAHF compile the instances where progress has deteriorated or been reversed. More systematic works show that generally social progress continues in the 1980s. The second lessons is that the data are generally too weak to draw undebatable conclusions on the subject.

What to Do

The World Bank has produced several statements on how structural adjustment programs can cope with the problems of poverty, and the social costs of adjustment, inter alia, Targeted Programs for the Poor During Structural Adjustment, (1988); Health and Nutrition Interventions in Latin America: Protecting Vulnerable Groups During the Economic Crisis - A Comparative Study of Six Countries (1988); How Adjustment Programs Can Help the Poor: The Experience of The World Bank; and Adjustment Programs and Social Welfare.

These papers do not provide much treatment of the design of the basic adjustment program -- measures to improve fiscal and trade balance -- but rather suggest accompanying policies and programs which may protect the poor. The bulk of the advice is sound even in periods with less burdensome fiscal constraints. The recommendations boil down to measures to improve the efficiency and equity of social spending. Targeting, cost recovery (with allowance for the indigent), concentration on primary levels of health care and education, stimulus to the private sector, etc., are all advocated. In these studies illustrations from countries which have successfully used the recommended techniques are usually provided.

A subset of this literature profiles special projects undertaken alongside adjustment programs which try, usually through employment programs and sometimes the provision of social services, to cushion the blow of adjustment to the poor. The treatment of the projects is largely limited to description of goals and administrative structure because they

have not yet been in place long enough to have a full body of evaluation of their success. [27]

Lessons from the Literature for This Study

The review of the literature suggests the shape that this social spending review should take in three ways. First, it confirms the gloomy prospects for the macroeconomic environment, thereby confirming the importance of examining the state of the social sectors in times of unusual fiscal constraint. Second, the dispute in the literature regarding the extent of changes in the level of funding to the social sectors, and regarding the changes in social indicators clearly suggests that this study should provide a careful review of those statistics for the countries examined here. Third, the literature signals that equity and efficiency in the provision of social services are fundamental issues in the context of the social cost of adjustment, just as they are in broader discussions of the social sectors.

27/ Except for the Bolivian Emergency Social Fund, which was founded in November 1986, and the recipient of the first Bank credit of this kind. ESF has had seven evaluations of different sort performed.

Appendix IX

The Process Behind the Country Case Studies

The main purpose for the comparative social spending review was to draw lessons about universal experience and best practice in the countries' social spending. Those are the issues addressed in the main text. A second purpose was also intended--the review of Bank practice in gathering, analyzing, using, and disseminating the information contained in the country reports. This chapter summarizes and contrasts the country experience in that respect.

In the comparison of reports, the first consideration is that they are very diverse in use of resources, coverage, and original intention as well as somewhat diverse in the substantive questions which received attention. The following briefly summarizes the country materials used in the comparative analytic work. The starred items are considered the main report, the others are ancillary. This distinction has more to do with the form of ultimate dissemination than the quality or content.

Argentina: Social Sectors in Crisis* issued in red cover in 1988. None of the background materials were used.

Brazil: Public Spending on Social Programs: Issues and Options* issued in grey cover in 1988. None of the background materials were used.

Bolivia: Public Sector Expenditure Review with a Special Emphasis on the Social Sectors* issued in grey cover in 1989. Background reports on education, health sector finance, and social security were used.

Chile: delays in the timetable for the Poverty/Social Sectors Study prevented its use in the comparisons. Budgetary information was obtained from Chile: Adjustment in Crisis issued in grey cover in 1987. Sectoral information came from "Innovative Social Policies for Reducing Poverty: Chile in the 1980s" a privately authored book manuscript by Tarcissio Castaneda, and from the education consultant's draft chapter for the poverty study.

Costa Rica: Public Sector Investment/Expenditure Review* issued in green cover in 1989. Supplemental information was obtained from more extensive drafts of the social sector chapters, extra consultant missions, and analyses of health, education and social security prepared under the technical adjustment loan. A new task to draw together this information into a single social sector paper was created and a report issued after the analysis presented here was completed.

Dominican Republic: The 1989-91 Public Sector Investment Program* issued in green cover in 1989 provided the background and macroeconomic context. A series of consultant reports on social expenditures, social security and nutrition contained most of the information used in the comparative

analysis. Methods for bringing them together into a product sufficiently focussed and polished for dissemination are under review.

El Salvador: Country Economic Memorandum* was issued in May 1989. The staff and consultant draft chapters on the social sectors were available.

Jamaica: Summary Review of the Social Well-Being Program* was issued in grey cover in 1988. It was written as sector work during the identification of the Social Sectors Development Project. Also used were Behrman and Deolalikar (1989), a background paper to OED's evaluation of the SALs, and the Preliminary Report on the Survey of Living Conditions, for both 1988 and 1989.

Venezuela: a draft statement on the social sectors, never included in a report* was used, with some supplemental information.

Objectives and Benefits

A poll of the task managers revealed that the strong majority of the reports used in these reviews as had their principal purpose the macroeconomic/budgeting/planning dialogue with the government. Identification of lending operations and of conditionality were less often motives. This concern principally with the macroeconomic dialogue explains why the analysis of aggregate levels is fairly uniform throughout the reports, but the level of detail and quality of analysis beyond aggregate levels is much more diverse.

Coverage of Topics

The focus and degree of detail varies greatly between reports. Table A.IX.1 summarizes the coverage of several themes and the use of specific indicators in the reports. The summary is not sensitive to the degree of emphasis placed on certain themes, but conveys an idea of their weight and the complexity of the studies.

Sectoral coverage is a significant defining factor of the reports. Five of the reports provide explicit macro-economic frameworks. This ranges from full modeling projections of growth, fiscal and trade balance in the CEMs and some PSERs to a brief reprise of the themes in the case of Jamaica. The Argentina, Brazil, and Venezuela reports which are focused exclusively on social sectors provide only an introductory couple of paragraphs, barely enough to provide a context for the reports. Education and Health are covered in every report. Nutrition is explicitly covered in Brazil and Jamaica. Social security is explicitly covered in Brazil and Bolivia. In some of the other reports nutrition and/or social security are mentioned in asides, or as sub-features of the health sector.

Appendix IX

The Process Behind the Country Case Studies

Table A.IX.1.: PSER Coverage

	ARG	BRZ	BOL	CR	DR	SLV	JAM	VEN
Sector								
Macro-Framework			X	X	X	X	X	
Health	X	X	X	X	X	X	X	X
Education	X	X	X	X	X	X	X	X
Nutrition		X					X	X
Social Security		X	X					
Time Frame								
Historical trends (5 yer min)	X		X	X		X	X	
Projections (2-5 years)			X	X	X		X	
Mainly Point in Time	X	X						X
Expenditures								
aggregate	X	X	X	X		X	X	X
current/capital			X	X		X	X	X
functional breakdown			X					
by program-health	X	X	X			X	X	
-education	X	X	X	X			X	
-nutrition		X						
-social security		X						
other than central gov't	X	X	X					X
rural/urban								
Investment Program Review			X	X	X		X	
Financing								
Sources of Gov't Rev	X	X	X	X		X		
Cost Recovery		X	X	X				
Transfers		X	X	X				
Institutional								
Sector Framework-Actors	X	X	X	X	X	X	X	
Budgeting Procedures	X	X	X		X			
Planning/Appraisal	X		X	X	X	X	X	
Project Implementation	X		X			X	X	
Role of Private Sector	X	X	X		X	X		X
Equity								
quantified	X	X	X		X			X
not quantified				X			X	

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The Process Behind the Country Case Studies

Table A.IX.1: PSER Coverage (con't)

	ARG	BRZ	BOL	CR	DR	SLV	JAM	VEN
Specific Indicators								
coverage of health care	X		X			X	X	X
coverage of nut. prog		X			X		X	X
coverage of pensions		X	X					
doctor/nurse ratio	X		X		X	X	X	X
student/teacher ratio			X					
wages in sector	X		X	X		X	X	X
compared to other wages			X	X				
health care worker output			X					
gross enrollment rate					X	X	X	
net enrollment rate	X				X			X
immunization rate								
malnutrition rate					X	X	X	X
use of textbooks	X				X		X	X
drugs	X	X					X	
attendance							X	
repetition		X	X	X				X
consultations		X	X		X			
hospital days						X		X
meals delivered	X	X			X			
test scores								

The focus is retrospective or prospective in equal numbers of the reports. Only two are basically concentrated in the present with the main focus on the current situation with little attention paid to change.

All the reports give aggregate expenditures by sector. Five of the eight break them down by current/capital. Only one breaks them down functionally. Only four reports break down expenditures in both health and education by broad level, e.g. primary/hospital or preventive/curative or primary/secondary/university. Four of the reports include breakdown of expenditures by levels other than the central government, at least for some levels or years. No report breaks down expenditures by rural/urban area or region.

Financing receives variable treatment. Five of the reports contain at least some explanation of the principal sources of government revenues, either for the whole government, or by sector. The Brazil, Bolivia, and Costa Rica reports also contain some detail on cost recovery and inter-governmental transfers.

All of the reports devote some attention to institutional isssues. Most explain the principal actors and cover budgeting, planning/appraisal and project implementation. All though coverage is frequent, it is sometimes quite vague.

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Both equity and efficiency are mentioned in all but one report, and even quantified in some way in all but one of those in which they are mentioned. The coverage is still not optimal, even recognizing the informational limitations. As the equity and efficiency chapters of this report show, we still do not have definitive answers to many of the subquestions concerned with equity and efficiency. In general, however, those chapters convey more than do the individual reports. This is in part because the fragmented evidence of different kinds from different countries is patched together to address as many issues as possible. Also, using background documents and outside sources some new analysis has been done during the comparative excercise which is not contained in the original country studies.

The second half of Table A.IX.1 lists a variety of specific indictors, variables or themes which could be expected to be found in reports of the nature reviewed here. Little uniformity of use is found. Some of these indicators are not available for some countries, and in the reports not focused exclusively on the social sectors there was usually a binding space constraint on each chapter, so it is not surprising that not all indicators are covered for all countries. It is, perhaps, surprising that the reports focussed exclusively on the social sectors do not seem to include many more specific indicators than do the broader reports.

Organization and Resources

Only three of the reports reviewed here are exclusively focused on the social sectors (Argentina, Brazil and Jamaica). All the others, as well as Argentina's, were managed by the country operations division, with the contribution of the sector divisions (see Table VII.2).

The number of staff weeks for reports that were issued (i.e. excluding the Venezuela draft) varied from a low of 42 for Bolivia to a high of 103 for El Salvador. The number of persons involved varies from a low of eight for Jamaica and the Dominican Republic, to twenty-four for Brazil. Except for Brazil, the strong majority of persons involved were Bank staff rather than consultants. This should improve the institutional memory and use of findings in later activities. The speed with which the reports progressed from initiating memorandum to final draft ranged from four months in the case of Jamaica to seventeen months for Brazil.

Dissemination

All but one of the reports reached at least grey cover. The preponderance of the discussion was with the government's central ministries rather than with the sectoral ministries. The reports were mostly multi-sector economic reports rather than specifically social sector reports, so the discussion with the central ministries is not surprising, and would be appropriate in any case. It may be useful to discuss the

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The Process Behind the Country Case Studies

Table A.IX.2: Organization and Resources

Jam	Ven			Ara	Bol	Bra	CR	DR	ES
Responsibility		COD	COD	SOD	COD	COD	COD	SOD	COD
Number of Staff Weeks		43	42	96	90	71	103	51	14
Number of Persons	9	10	24	12	8	10	8	3	
Staff				6	6	10	10	7	7 8
1									
Consultants				3	5	14	2	1	3 0
2									
Number of Calendar Months			12	17	9			4	
Mission--unified	x		x	x	x	x	x	x	
staggered			x						
Gov't Team Involved									
Central				x	x		x	x	x x
x									
Sectoral				x		x	x		x x
Compilation of Expenditure Data									
Bank-central					x				x x
sectoral				x	x				x
Govt-central				x	x		x		x
sectoral				x			x		x

sectoral chapters with the sectoral ministries more often. This will depend on the country's agenda of policy and lending, and the quality of the sectoral chapters. If the sectoral chapters are fairly slim, their value may be much greater as an overview and education to the central ministries than as a basis for serious discussion of sectoral strategy with the sectoral ministries. There is no strong reason why the sectors would have to be treated in a parallel fashion.

Three of the reports were formally discussed with other donors at the consultative group. One additional report was informally discussed with a single donor, as part of a cofinancing arrangement. Where the government is not unduly sensitive to the release of the information in the reports, it would seem profitable to include other donors in the dissemination more often. Many do not have the resources to do such extensive analysis themselves and could use the Bank's work to good advantage. For those agencies which do perform their own analysis, the dissemination of the Bank's could help in aid coordination and in understanding specifics of issues, advice, analysis, etc. where two donors are active in a single sector. This should help to minimize subjecting the client government to conflicting pressures and conditions.

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The Process Behind the Country Case Studies

Table A.IX. 3: Interaction with Government and Donors

	Jam	Ven		Arg	Bol	Bra	CR	DR	ES
Final cover		red	grey	grey	grey	grey	grey	grey	white
Discussion									
w/ Central Ministries	x		x	x	x	x	x	x	
w/ Sectoral Ministries	x		x				x	x	
w/ Other Donors-formal (e.g. at C.G.)			x		x			x	
w/ Other Donors-informal		x			x	x		x	

Appendix X

Public Expenditure Reviews: Checklist for the Social Sectors

In the detailed comparisons of World Bank public sector expenditure reviews (PSERs) done in the course of writing Social Spending in Latin America: The Story of the 1980s (Report No. 8450-LAC), their uneven quality became clear. This memorandum is meant to be used as a checklist for the task manager or sectoral specialist working on a public sector expenditure review which includes the social sectors (many of its recommendations would be applicable to other sectors)[28]. Part of the premise of the checklist is that Bank PSERs could attain much higher quality at low marginal cost.

The checklist has been designed to be comprehensive. As such, not all of the suggestions will be applicable in every PSER. In some cases data simply will not be available, in others the focus of the report or the constraints on its length will mandate the inclusion of only a subset of these issues. Before dismissing items, however, the task manager is urged to review carefully whether it is necessary to discard them.

Principal Themes

The real point of a PSER is not just to know the level of social expenditures, or changes in the level, but what they imply about the adequacy of public social service delivery. To be able to answer that question, four other issues need to be addressed: (i) what quantity and quality of services do those expenditures buy, i.e. what is happening to the prices of inputs and the level of output; (ii) how equitable are expenditures?; (iii) how efficient are expenditures?; and (iv) what services are provided by the for-profit and not-for-profit private sector?

Changes in Input Prices. There is a tendency in PSERs to regard increases in expenditures as good and decreases as bad. The underlying assumption is that increases in expenditures improve the quality or coverage of services. That, of course, is true only if input prices are constant. The very context of most PSERs, however, is that of devaluation and falling real public sector wages. The price of imported pharmaceuticals and medical supplies will rise with a devaluation, stretching health budgets. Conversely, falling wages will lower the cost of the biggest budget item of health and, especially, for education. Changes in the coverage or quality of services may therefore be much smaller than changes in expenditures, if changes in prices are considered (See Box III.2 for an illustration of this). The change in the prices of the sectors' major inputs and the implications for service delivery should therefore be reviewed.

28/ A more general and comprehensive treatment is found in de Melo (1987).

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A further issue is the dynamic effect of wage changes. Teachers' salaries may fall in concert with total education expenditures so that teachers need not be laid off nor schools closed. If, however, the salaries fall more than other wages in the economy, teachers may quit and take other better paid jobs. The minimum data requirements to evaluate this problem are usually easily available. The total wage bill can be divided by the total number of staff to obtain a rough average salary for the specific sector. Although the optimal comparator data may not be available, most countries have some series of wage data available. Wage series for formal sector workers, or salaried workers, or urban workers, are adequate to compare with the wages of health and education workers to reveal whether there are strong incentives for large migrations from the sector. Even using other public sector wages or GDP per capita as the comparator is preferable to omitting the theme.

Equity. Household survey data on the use of public services, coupled with detailed budgetary information on the cost of providing them, give the best measure of equity. Given that series of comparable data are extremely scarce, other short-cut measures should be used. The breakdown of expenditures or service provision by primary/secondary, preventive/curative, and rural/urban (or other geographic distribution which is known to be highly correlated with the income distribution) will go a long way to approximate the level of equity, or changes in it.

Efficiency. Both external efficiency (the choice of activities most appropriate to reach the goal of better health, education or nutrition status) and internal efficiency (performing those activities for the least cost) should be measured. Proxies for external efficiency are usually available from budget data. Again, the breakdown of expenditures by primary/secondary, preventive/curative, etc. can be used. Internal efficiency indicators are usually generated in the internal information systems of the service delivery organization. Not all will be available, and some may require special compilations. Effort should be made to review carefully what is available and in what form.

Private Sector. The actions of the private sector will, by definition, be treated but passingly in a PSER. It is, nonetheless, useful to provide a rough indication of the level of coverage by the private sector. In education, private sector enrollment rates are usually available. In health, the issue may be more difficult. The registration of private physicians or number of private hospital beds will give some idea of the size of the private sector.

In some countries, the private not-for-profit (alternately called non-governmental organizations, or private voluntary organizations) sector may be a significant actor in the social sectors. In such cases, a canvas of the major international funding sources, especially the bilateral

agencies, is usually feasible and will give a rough idea of the sector's size and activities.

Expenditures. The expenditure data itself will provide a good deal of the information needed for the analysis of services if it is obtained in several separate categories as well as in total. One of the flaws often encountered in PSER work is that the data as provided to the Bank mission have already been aggregated in ways that lose some of the detail needed to assess equity, efficiency or quality. The terms of reference for the data manipulation should clearly specify the desired disaggregations.

A list of some of the most standard and/or desirable indicators for each of the themes mentioned above is provided in Table A.X.1. The report will be richer for gathering more indicators, but rarely will all be available. Attention should be given, however, to finding information on each subject. It is better, for example, to have one indicator each of external and internal efficiency than two indicators of external efficiency and none of internal efficiency.

Innovative Data Sources

Most PSER chapters are written with relatively few resources, and sometimes by persons not very familiar with the country. The main data sources are those that can be gathered from government officials in the course of a short mission, with the help of suggestions from staff of the Ministries of Planning or Finance, regarding who to contact and where to look. The mission member patches together what comes fairly readily to hand, which may not be what s/he originally wanted. This is not likely to change much, but there are three sources of data that should be investigated.

Other agencies active in the sector may have collected much of the same kind of information needed for a PSER. The local desk officers of the active bilateral and multilateral organizations should be approached early with the general outline of the PSER needs, and later with specific requests for information, references or confirmation of information.

The academic community in the country being studied may have a few people who are experts in the country and issues addressed. An effort should be made to locate them and solicit references. They can sometimes be used as short-term consultants to good advantage. Occasionally similar resources can be found in the international academic community.

Special Data Crunching. It is not unusual in a PSER to have a special team (usually provided by the government, but occasionally paid for by the Bank) do some crunching of budgetary data to put it in the form most useful for the PSER. The effort is, however, usually limited to centralized expenditure data. There may be cases when it is worthwhile to

employ the same techniques on the administrative/service statistics of the line ministries. That will be most helpful in the case of efficiency issues.

Exhortation to Specificity

Budgeting and Planning. Many PSERs mention budgeting and planning briefly; vague criticism is common. Careful distinctions should be made as to the sort of problem perceived with the budget process. This could be achieved by addressing the following questions: Is the problem one of process and quantifiable, e.g. are budgets produced after the beginning of the spending period, or consistently much higher or lower than realized expenditures? Is the "problem" with the budget that it assigns priorities differently than the analyst? Is the problem that the critical review of priorities of the sectoral and central agencies is scanty or inharmonious? Is the information base inadequate? Are revenue projections systematically wrong?

In the discussion of planning, similar specificity is needed. The scope of planning (detail, levels of government covered, types of activities) should be made clear. Then whether the problem is inappropriate scope, time horizon, or quality can be better understood. In some cases, the comments on planning seem to relate to a dearth of feedback systems. Without these for monitoring and evaluation it is unsurprising that planning would be of inadequate quality.

Adequate Documentation and Definition. In the cross-country review, the work was made extremely difficult, and the quality lowered, because the generally inadequate standards for documenting the sources and the definitions of the data presented in the individual PSERs. The deficiencies in reporting standards would equally hinder comparisons with other sources for the same country, or later use in evaluating the impact of changes in policies, programs or general conditions. While it can take a bit of imaginative editing to keep the report flowing smoothly with adequate documentation, the report's usefulness depends largely on the quality of documentation. Three examples of the kind of specificity needed (and sometimes omitted) follow:

> Government Expenditures--Is the concept that is used consolidated public sector, consolidated federal, simple federal? Does is include expenditures financed from international aid, cost recovery, etc.? Have interest payments been netted out first? Are they budgeted or executed expenditures? Is the source the Ministry of Finance, or of Planning, or the Central Bank, or the line agency? Do the numbers differ from those from other sources, and if so, why? How have they been deflated and converted to US dollars? Have

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the institutions or items included in the total changed over time?

Malnutrition Rates--Do the rates measure weight for age, height for age, or weight for height? Is the decision criteria the Gomez scale, the WHO scale, or standard deviations from the sample mean? Is the data based on representative sample surveys or does it come from clinic-based reporting systems?

Health Expenditures--Do the expenditures include only the Ministry of Health expenditures? Have health expenditures made by the social security institutes, military, school system, etc. been added in? Was the aggregation done uniformly? Have the costs of the nutrition programs been included or are they treated separately? If the Ministry of Health is also an actor in water and sewerage projects, have those expenses been subtracted out? Is the cost of medical training facilities included in the health expenditures or in the education expenditures? Is the treatment uniform for medical schools, nursing schools and technician training programs?

PSERs are a mainstay of the Bank's economic and sector work and guide a good deal of the policy dialogue and project identification. It is therefore worthwhile to invest the extra imagination and, sometimes, resources in trying to move beyond aggregate expenditures in the accounting sense, to the diagnosis of the services so provided.

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Table A.X.1: Checklist of Indicators

Expenditures

_____aggregate
_____current/capital
_____functional breakdown (wages, materials, maintenance, etc.)
_____program breakdown (primary/secondary, preventive/curative, etc.)
_____by level of government
_____by major institutions
_____rural/urban (or other geographic definition correlated with poverty)
_____as percent of government expenditures
_____as percent of GDP

External Efficiency

Education

_____rates of return to education by level
_____expenditures by level
_____cost per year of schooling
_____coverage by level

Health

_____expenditures by program
_____frequency and share of total costs of high technology procedures (e.g. Caesarian sections, heart surgery)
_____public subsidies to elective (especially cosmetic) surgery

Internal Efficiency

Education

_____teacher/student ratio
_____number of hours teachers teach
_____use/availability of textbooks
_____repetition
_____completion
_____years to produce a graduate
_____attendance
_____test scores
_____hours of class time per week; school days per year
_____percent of class time spent on task
_____hours spent on homework
_____administrative costs as percent of total costs

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Health

_____doctor/nurse ratio
_____use/availability of pharmaceuticals
_____hospital occupancy
_____average hospital stay
_____number of consultations per medical staff
_____intensity of use of primary vs. secondary facilities for primary services (i.e. use of hospital outpatient facilities for simple primary care, immunizations, pre-natal care; whether amenable procedures have been decentralized where possible, e.g. whether tubal ligations are done with hospitalization or outpatient)
_____administrative costs as percent of total costs

Social Security Pensions

_____return on portfolio
_____percent administrative costs
_____personnel per number of affiliates

Equity

If incidence figures are available from survey data, use them. If not, then the activities can be ranked according to general experience and the percentage of expenditures in the different activities used as a proxy, as discussed in paragraph 6 of this appendix, and Chapter 2 of Social Spending in Latin America: The Story of the 1980s.

Social Indicators

Education

_____Gross enrollment rates
_____Net enrollment rates
_____Numeracy
_____Literacy

Health

_____Infant or Under-Five Mortality
_____Maternal Mortality
_____Life Expectancy
_____Immunization Coverage

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_____Percent of births attended by medical personnel
_____Number of consultations per capita per year
_____Incidence of Diarrheal Disease
_____Malnutrition Rates -- weight for age (Gomez or WHO scale)
height for age
weight for height
low birth weight
micronutrient deficiencies

Social Security Pensions

_____Coverage in total and by sector
_____Pension benefits as percent of poverty line or minimum wage
_____Pension benefits as percent of salary earned while working

Financing Sources

_____sources of funds (possibly by uses)
_____taxes
_____user fees
_____international sources
_____interinstitutional transfers

Other Data

_____wage series
_____exchange rates
_____price indices
_____income distribution and correlates of poverty

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